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PLANNING AND PLAN IMPLEMENTATION

GOSPLAN COLLEGIUM MEMBER DISCUSSES PLAN BALANCE SHEETS

Moscow SOTSIALISTICHESKAYA INDUSTRIYA in Russian 29 Jan 81 p 3

[Article by I. Kalinin, Collegium Member, USSR Gosplan: "Balance Sheets—The Base For the Plan"]

Respected Editors! All our workers know what the plan is; its fulfillment is law. For our individual socialist obligations, we are outlining an intensive program, and are striving to over-fulfill the tasks which have been defined. However, not everything depends upon us. Work stoppages and interruptions frequently occur as the result of supply and organizational problems. I think that errors in planning are affecting the situation here. The Basic Directions draft outlines the necessity for providing the development of balanced planning tasks for all indicators. It would be interesting to hear what the specialists say: what specifically is being done to strengthen the plan and for its comprehensive fulfillment?

[Text] Actually, a great number of problems in production still occurs as the result of plan imbalances. And afterall, it is the chief instrument of the party's economic policy. In order to improve its effectiveness, the Primary Directions draft poses the task to expand the comprehensive nature and balance of plan tasks at all levels of the economy and for all indicators.

What is dictating the necessity for such an approach? Primarily, the changing conditions in the entire economic operation. Today, our economy is a complex, multi-branch mechanism. Fixed production capital has attained 1 trillion, 100 million rubles, concentrated in more than 43,000 industrial and scientific-industrial production associations, combines, and enterprises, in approximately 47,000 kolхозes and sovkhoses and more than 25,000 contracting construction organizations. They are connected by a branched and intensively operating transportation system—the annual freight turnover of which exceeds 6 trillion ton-kilometers.

To insure the balanced development of such a vast and complex economic organism, you understand, without centralized allocation of resources among ministries and departments, union republics, territorial-production complexes, and major construction sites would be unthinkable. However, the organization of such work under current conditions is hardly simple. For example, the resource allocators, to whom the resources are allocated from the center, or as the specialists say, by separate lines, during the past 15 years have increased their number by threefold, increasing to over 300 this year.

Without question, the work of branch and balance departments in the central planning organs has become more complex. Particularly when requirements must be defined. Consequently, the union ministries must assume a portion of that work. Several of them approach this from a very narrow departmental position, however, attempting to shift the responsibility for the correct determination of requirements, say for their construction organizations to Gosplan and the USSR Gosstab (Council of Ministers State Committee for Technical-Material Supply). This applies particularly to the Minenergo (Ministry of Power and Electrification). This ministry has 13 construction organizations, the material resources for which are allocated by a single line. These organizations carry out more than half of the ministry's construction-installation operations, but it persistently strives for not reductions but additions in the number of such construction organizations. Why this is the case is understandable: the responsibility for their provision is borne by the central organs.

The Central Committee of the party and the USSR Council of Ministers indicated the necessity to increase the responsibility for the balance of state plans not only of central planning organs, but of all union ministries and departments as well. For this, a procedure has been established for formulating balances for material resources and their allocation, and functions have been precisely limited to responsibilities defined for Gosplan, USSR Gosstab and branch ministries and departments and union republic councils of ministers. The product range has been established for each element of the economic operational organization.

Gosplan USSR is currently developing for a 10-year period balances for 163 major types of production. Additionally, primary directions for the utilization of the production are defined for the final year of the five-year period. Gosplan has established balances for 409 types of production for the five-year plans themselves. Of those, 331 have distribution plans for primary resource allocators and by year in the five-year period.

All primary resource allocators (they receive from 65 to 85 percent of material resources) are within the orbit of a central planning organ. This has principal significance and will considerably promote a better balance of five-year plan tasks for industry, agriculture, construction, and commodity turnover with the actual capabilities of the national economy. Additionally, more favorable conditions are being created for the development of direct, long-term economic ties for the five-year period.

The product list for annual allocation plans and material balances has been refined. Gosplan has transferred 120 types of production to Gosstab for distribution, and 33 types to union ministries. However, it in turn received 117 new types of production, including 64 from Gosstab's product listing. Now, USSR Gosplan will develop balances and allocation plans for 2,044 types of products. Of those, 306 are subject to ratification by the USSR Council of Ministers.

Regarding Gosstab USSR, its organs will develop material balances for 28 major types of products for the ten-year long range plan, and for the five-year period, for 300 types of products (almost two and one-half times more than previously), and for the year, 7500 supplemented groups of production. USSR Ministries and departments and union republic Councils of Ministers will develop, ratify, and be responsible for executing material balances and allocation plans for more than 25,000 types of industrial production.

The entire balance operation is now directed toward a fuller provision of the national economy with all types of material resources. Of first priority are non-ferrous metals, fuel, and electrical and thermal power. In this regard, the practice for their utilization is now being reviewed. Beginning with this year, together with the tasks for reducing the average expenditure standard for rolled steel, tasks are being established for the overall specific expenditure of metal, reduction of metal content for specific major types of articles in natural expression, and increasing the coefficient of metal utilization. Strict material and administrative responsibility is envisaged for exceeding expenditure norms for metal, and monitoring is being stepped up regarding ministries', associations', enterprises' and organizations' observance of state and planning discipline for the expenditure of metal at all stages of its production and use.

The Basic Directions draft defines major tasks in conserving material resources. Achieving the goals requires a significant improvement in standardization for all industrial resources. Since 1 January 1981, differentiated tasks for the average reduction in expenditure norms for raw materials, materials, and fuel-energy resources have been defined for associations and enterprises.

Occasionally the opinion is expressed to the effect that the normative or standard method purportedly retards or impedes the initiative of the economic managers. This opinion cannot be concurred with. This method regulates their operation by publicly necessary standards for the utilization of resources. Those norms must tend toward lower levels. This means that ways must be sought to accelerate scientific-technological advance, and to rationally utilize raw materials, fuel, and energy to achieve high terminal results.

One of the conditions of stability in fulfillment of plans is material resource reserves. In the 11th Five-Year Plan, they will be already formed for 130 major types of products. The reserve standards or norms are considerably higher than those established for the past year.

Of course, a highly balanced national economic plan is unthinkable in isolation from the interbranch plan. This is particularly so in the ferrous and non-ferrous metallurgy, chemical industry, machinebuilding sectors. The disproportions occurring here limit the final result, and the non-fulfillment of production plans for various types of production disrupts the balance of the economy.

However, the task must not be oversimplified which must be carried out in the development of balances and plans for the allocation of material resources for the new five-year plan. Differing from the annual plans, their industrial production volumes are established as a rule, with allowance for the use of existing capacities, and material balance resources of the five-year plan will include production from capacities which are only being built or, at best, being placed in operation. For example, in the ferrous metals area the production of ready rolled ferrous metals during the upcoming five-year plan must increase by 14-17 million tons. Primarily, this is to be achieved through the introduction of new and remodeled capacities. The practicality of the balance will to a great extent be dependent upon the quality of the plan for capital construction, its strict balance with the actual capabilities of the construction organizations, with material and financial resources, and with equipment delivery schedules. Therefore, the strict observance of planning discipline and the timely and complete fulfillment of contracts and orders are the chief

conditions for the proportional and balanced development of the national economy to be satisfied by the plant-suppliers. Particular attention and coordination is required for tasks relating to the production of industrial products with plans for transportation. The resolution of these problems, and central planning organs are now working on them, will facilitate providing for the rational use of all resources at the disposal of the national economy and increase the intensification of production. This is a key assignment.

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INVESTMENT, PRICES, BUDGET AND FINANCE

FINANCIAL METHODS TO REDUCE PRODUCTION LOSSES PROPOSED

Moscow FINANSY SSSR in Russian No 12, Dec 80 pp 21-24

[Article by R. S. Lukina, senior economist at the Scientific Research Financial Institute: "The Financial Mechanism for Reducing Losses in Associations and Enterprises"]

[Text] Starting in the Ninth Five-Year Plan one could see a tendency for a slowdown in the growth rate of profit in all the national economic sectors. Profit dynamics were negatively influenced by the slowdown in the reduction rate of product costs. The process of the increased costs of production to a definite degree has occurred under the influence of objective factors and is related primarily to the increase in the share of the Eastern regions of the nation in the total balance of raw material resources. The development of the new deposits of oil, gas, coal, ores and forests in Siberia and the Far East increases expenditures on the extraction and processing of the initial raw materials. However, we must not overestimate the importance of the objective factors and propose them as an argument justifying the slow decline in costs. The reduction in production expenditures depends basically upon the level of management, the introduction of recent achievements of science and technology and the carrying out of organizational and technical measures aimed at reducing material, labor and capital intensiveness. In this regard the problem of reducing losses which lower the efficiency of social production assumes great significance. These losses must be viewed as unrealized opportunities for the optimum utilization of the labor force, the means and subjects of labor as well as finished products. In accord with this the losses can be divided into production and nonproduction. In turn, the production losses can be divided into labor (losses of working time due to absences without leave, entire-day or intrashift stoppages and personnel turnover) and material (as a result of faulty products, the nonutilization of wastes and other unproductive expenditures). The material losses also include the nonsales losses and those which arise in the sales of the products.

Analysis has shown that the largest total of losses is accounted for as part of actual costs. This is the losses from defective products, the nonrecovery of waste products, the irrational utilization of the wage fund (the paying of overtime, supplements to piece workers because of a change in working conditions, payment for entire-day and intrashift stoppages), and losses from unproductive expenditures (as a consequence of shortages and damage to material commodities, equipment stoppages,

the underutilization of pieces, assemblies and production fittings, surcharges to the electric power rate and so forth). A reduction in them would be a significant reserve for reducing costs.

A large portion of the losses put against costs has been caused by the underutilization of waste products. In 1978, these losses increased by almost 1.5-fold in comparison with 1970. Their proportional amount in the cost of the consumed raw material was approximately 3 percent for industry as a whole, 9.5 percent in machine building, 4.5 percent in the extracting sectors and 1.9 percent in the light and food industries. In line with the growth of the production volume for all the industrial sectors, both those producing and consuming raw materials, the problem of the complete recovery and comprehensive utilization of waste products is assuming great significance.

It is essential to organize control over the occurrence of production wastes and strictly account for them. This is particularly important for machine building. It must be said that the shops do not account for the types of waste products and this is done only as a whole for the enterprise. In a majority of instances the wastes are normed for the product. The value of the wastes is distributed over the product types proportionately to the planned costs and to the normed or actual expenditure of materials. This distorts costs and weakens control over the utilization of materials. It is essential to strengthen control over the amounts of wastes and they must be accounted for in terms of norms and deviations from them according to the costing groups of the materials. This will provide an opportunity to determine the reasons for and the guilty parties of overexpenditure. The wastes in machine building represent a valuable raw material which could be used for the needs of the enterprise or sold to other plants. The preliminary processing and grading of the wastes will make it possible to sell them at higher prices and obtain additional profit.

In order for the enterprises to have an economic interest in the recovery of the wastes, it is essential, in our view, to revise the material incentive conditions. At present, the bonuses for the saving of materials are basically paid from the wage fund. At the enterprises operating on cost accounting such a procedure can lead to an overexpenditure of the established limit of this fund and, in order to avoid this, they prefer not to encourage the utilization of waste products. It is advisable to set up a special bonus fund from the money formed as a result of the utilization of the waste products.

Analysis of the dynamics of production losses due to the irrational expenditure of the means and subjects of labor in industry has shown that their growth rates outstrip the increase rates of the production volume. The total amount of losses in 1968 rose by 1.7-fold in comparison with 1970, while over this same period the volume of commodity product increased by 1.5-fold. Many ministries, associations and enterprises have not worked out specific measures to reduce losses, and if they are worked out then they are of a formal nature. This happens because the assessment of plan fulfillment in terms of profit or costs (depending upon the fund-forming indicator) is carried out as a whole for the indicator without considering the influence of the permitted losses on it.

The reserves for reducing costs and increasing profit by lowering losses are realized primarily through the plans and are expressed in the planned costs and profit. In order to include these reserves in the plan and work out a range of realistic measures to reduce losses, it is essential to know their amount and determine the degree of their influence on the end results of financial and management activities. For this it is essential to have a careful study of many forms of bookkeeping and statistical accounting. In the aim of strengthening the role of economic analysis in disclosing losses, it is essential to concentrate them in a single form of accounting and this must be included as part of the annual report.

The USSR TsSU [Central Statistical Administration] on 28 September 1979 approved a summary form of accounting for nonproductive expenditures, losses and wastes. This has had a positive effect upon the quality of statistical reporting. There must be a further improvement in the designated form, and in particular by grouping the unproductive expenditures, losses and wastes according to the sources of their compensation. The following standardized form is offered here.

Summary Accounting Form for Unproductive Expenditures, Losses and Wastes
at Industrial Enterprises, Associations and Ministries

Composition of Losses		Total
I. Losses recovered from profit,--total		
Including:		
1. Losses from paid penalties, fines and forfeits		
Including:		
a) For underdelivery of product		
b) For delivery of poor quality and incomplete products		
c) For transport stoppages		
d) For nonfulfillment of scrap metal turn-in		
e) Penalties for overdue payments		
f) Other fines		
2. Losses related to packaging operations		
3. Losses from writing off debts against shortages, theft and other uncollectable debts		
4. Losses from the liquidation of not fully-amortized fixed capital		
5. Losses from natural disasters		
6. Losses from the up-keep of mothballed enterprises		
7. Other losses		
II. Losses recovered from costs,--total		
Including:		
1. Losses from defective products		
2. Losses from waste products		
3. Shortages and losses from damage of materials		
4. Losses from equipment stoppages		

5. Rate surcharges for electric power (for the "phi" cosine)
6. Losses from underutilization of pieces, assemblies and production fittings
7. Unproductive wage payments
 - Including:
 - a) Additional payment of piece workers related to change in working conditions
 - b) Additional payment for overtime work
 - c) Payment for whole-day and intrashift stoppages
8. Other unproductive expenditures

TOTAL

At present the unproductive expenditures, losses and damage are basically covered either directly from profit or are put against product costs. In both instances they lead to a reduction in profit which is to be distributed between the economic organization (the ministry, association or enterprise) and the state budget. Thus, a portion of the losses is in effect covered from the state budget. To illustrate this, the following calculation can be given (figures hypothetical):

1. Profit deduction rate for budget	60%
2. Profit for distribution	70 mln. rubles
Including losses put against profit and costs	10 mln. rubles
3. Actual profit deductions to budget	
$\left(\frac{70 \text{ mln. rubles} \times 60\%}{100} \right)$	42 mln. rubles
4. Net income (profit without losses) (70 + 10)	80 mln. rubles
5. Deductions into budget of profit without losses	
$\left(\frac{80 \text{ mln. rubles} \times 60\%}{100} \right)$	48 mln. rubles
6. Total losses covered from budget	6 mln. rubles

From the given calculation it can be seen that a net income (profit without losses) of 80 million rubles had been created. However, the committed losses reduced it to 70 million rubles. Ultimately the deductions into the state budget with a rate of 60 percent were reduced by 6 million rubles.

Losses relate to the profit distribution sphere and should be compensated for by the self-financing subdivisions and not out of the state budget. First of all this would require changes in the procedure for the planning and calculating of costs. The losses from defective products, unutilized wastes and other unproductive expenditures should be excluded from the planned and actual cost.

With the existing planning practices, the costs of the base year are reduced by the total amount of the unproductive expenditures and losses from defective products, that is, during the planned period this amount is considered a savings from the elimination of losses. Such a planning system has a formal nature as it is unrealistic for a report period to fully eliminate all losses and the enterprises, knowing ahead of time of the pending unproductive expenditures, do not accept taut

plans for economizing for the costing expenditures on production in order to cover the losses out of the savings from certain of them.

Experience shows that even with normal operation of enterprises, losses can occur for reasons beyond their control. The task is to minimize these losses. The most dependable way is to set norms for loss reduction. Such norms can be the average percentage of unproductive expenditures and losses for the sector or the percentage existing at leading enterprises. The loss reduction norms should be worked out by the ministries for the groups of enterprises considering their operating conditions.

In order to provide an incentive for the enterprises to continuously reduce losses, a portion of the savings obtained from the overfulfilling of the quotas for reducing expenditures, losses from defective products and unproductive wage payments should be transferred to the material incentive fund. Such experience exists in the socialist countries. For example, in the GDR, 10 percent of the savings for fulfilling the state quota for reducing defective products goes into the fund for improving working conditions and rationalization and this fund is used for material incentives for the employees.

Nonsales losses accounted for as part of balance sheet profit contain elements related to a change in the fixed and working capital, cash and disposable stocks and also express the monetary relationships between the enterprises. These losses are related to the profit distribution sphere. For this reason it is proposed that they should be isolated and accounted for in a uniform form along with losses covered from costs.

The question arises of the sources for covering unproductive expenditures, losses and waste. They must be covered from a special fund created on a cost accounting basis. Initially for forming this fund it would be advisable to allocate money in an amount of the average actual losses over the previous 2-3 years considering the plan for reducing them. In planning for subsequent years this fund should be reduced in accord with the set rates for reducing unproductive expenditures, losses and wastes. The fund will be replenished from the nonsales profits (penalties received, profit from packaging operations, income from the rebates on the electric power rate and so forth). The overexpenditure of this fund should be covered out of the material incentive fund.

Another group of losses is the above-norm or above-plan expenditures of raw products, materials, fuel, energy, amortization, wages and so forth. These losses are considered to be an exceeding of the productive expenditures as part of costs and are covered by a reduction in full costs. But in order to cover this overexpenditure the enterprise must use additional manpower, subjects and means of labor. As a result live and embodied labor is employed unproductively.

The question of eliminating the above-norm or above-planned expenditures of raw products, materials, energy and so forth accounted for as part of actual costs is an important one for all enterprises, associations and ministries, both those permitting the underfulfillment of the planned cost quotas as well as those meeting them. For eliminating the above-norm or above-plan expenditures, it is essential to alter the procedure for assessing the fulfillment of the cost plan. It must not be considered fulfilled in the event of an overexpenditure for the basic

expenditure item in the cost structure. If production is material intensive, then out of all the expenditures one must isolate the material ones, and if labor intensive, then the expenditures on wages. When the primary task of the enterprises is to reduce comprehensive expenditures, in assessing the fulfillment of the cost plan it is essential to consider the overexpenditure for the general plant, shop and other expenditures. The composition of the costing items should be set for the enterprise by the ministry and this would force the taking of measures to reduce expenditures on the basic expenditure item and ultimately attain a further reduction in costs.

In accord with the Decree of the CPSU Central Committee and the USSR Council of Ministers of 12 July 1979, No 695, it is envisaged that where advisable the ministries, associations and enterprises of individual sectors may have set for them a quota for cost reduction. Such a quota must be set in those instances when this is dictated by the economic situation and when there are unused opportunities for reducing production outlays. This applies above all to those ministries, associations and enterprises which systematically permit increased costs as well as to the low profit enterprises which are on the brink of operating at a loss.

A quota for cost reductions should be set for all enterprises where the share of loss products in total product output exceeds 10 percent. It should be concretized for the types or groups of products with the putting of the loss products in a separate group. If the quota is not fulfilled, then the amount of the incentive funds calculated in the report year should be reduced by 50 percent even under the condition of fulfilling the established plan for cost reduction as a whole. The application of such a sanction will force the enterprises to work out and implement specific measures to eliminate loss products.

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INVESTMENT, PRICES, BUDGET AND FINANCE

METHODOLOGY FOR DETERMINING EFFECTIVENESS OF CAPITAL INVESTMENTS (PART II)

Moscow EKONOMICHESKAYA GAZETA in Russian No 3, Jan 81 pp 11-14

[Conclusion to the instructions "Method for Determining the Economic Effectiveness of Capital Investments"; for Part I see JPRS No 77463, No 951, 2/26/81]

[Text] C. Determining the Effectiveness of Capital Investments into Environmental Conservation¹

53. The social effectiveness of environmental protection expenditures is measured by the ratio of the natural indicators expressing the social result to the expenditures required to achieve this. The social effect is determined from the difference of indicators characterizing the changes in the social sphere as a result of implementing environmental protective measures.

The economic effectiveness of environmental protection expenditures is set by correlating the economic results and the expenditures which have caused them. The economic effect is calculated from the difference in the economic results of material production, the expenditures in the nonproduction sphere, the outlays from the state budget and the personal funds of the public with the existing or planned state of the environment or the state which could arise without carrying out the environmental protection measures.

54. In calculating the economic effectiveness from the improvement or prevention of decline in the productiveness of natural resources, the approved economic estimates for the land, water, forest and mineral raw material resources are used. For those types of resources where such economic estimates have not yet been worked out, the economic effect is determined using indicators for net product, profit or the decline in costs.

55. In determining the full economic effect from implementing environmental protection measures, it is essential to consider the prevention (reduction) of losses

¹For more detail see "Vremennaya Metodika Opredeleeniya Effektivnosti Zatrata v Meropriyatiya po Okhrane Okrushayushchey Sredy" [Provisional Method for Determining Effectiveness of Expenditures into Environmental Conservation Measures], Moscow, 1980.

over the entire territory where the negative consequences are felt from the disruption of the natural environment, that is, the city, the urban agglomeration, industrial center, urban or rural rayon. This determines the necessity of a total accounting for the economic effect at the enterprises and in the sectors which carry out environmental protective measures and employ an improved natural resource, in addition to the savings from reducing the additional outlays from the state budget and the increase in the real income of the population living or working on the territory with an improved environmental condition.

56. The determining of the overall (absolute) economic effectiveness of capital investments into environmental protective measures is carried out by correlating the annual volume of the full economic effect to the capital investments which have provided this result.

In working out the plans to carry out environmental protective measures, in the calculations for the overall effectiveness of expenditures into these measures the obtained indicators for economic effectiveness are compared with the elaborated norms² as well as the indicators for expenditures into analogous measures at leading enterprises of the corresponding sectors and which have achieved the planned end results of environmental conservation.

57. The economic effect from carrying out environmental conservation expenditures is determined as the overall (national economic) and cost accounting effect:

a) As the overall effect calculated for the nation as a whole, for the Union republics, the national economic sectors, the sectors and subsectors of industry, agriculture, transportation and communications, as well as in the sectors of the nonproduction sphere operating on the basis of cost accounting--in terms of the growth of the economic estimate for natural resources or in terms of the growth of net product;

b) As the cost accounting effect calculated for the individual enterprises and associations, administrative rayons, territorial production complexes and industrial centers--in terms of the increase in profit or reduction in costs, and in keeping with the conversion to the calculating of (normed) net product--also in terms of the increment of the latter amount.

In sectors, organizations and institutions of the nonproduction sphere which are completely or partially financed from the budget, the methods of calculating the overall and cost accounting effects are identical and the effect is determined from the amount of the savings in average annual expenditures.

²The norms for the economic effectiveness of expenditures on carrying out environmental protective measures in terms of each type of natural resource should be given in the sectorial instructions to determine the economic effectiveness of expenditures into environmental protective measures and approved by the USSR Gosplan.

58. In working out the long-range forecasts and programs for environmental conservation in a region and in designing environmental protection projects and complexes, the need arises of selecting the most effective variations for the technical solutions which perform exclusively environmental protective tasks and the variations for multipurpose measures where, along with the tasks of environmental protection, other production tasks are also carried out. In carrying out measures where the realization or the achieving of an effect requires an extended time (the replenishing of fish stocks and so forth) while the operating expenditures and capital investments change over time, the adjusted expenditures at the start of the calculated period are determined from the formula:

$$\sum_{t=1}^T = \frac{K_1 + K_{at} + C_{ct}}{(1 + E_{rf})^t} \rightarrow \text{minimum}, \quad (17)$$

where K_1 --the initial capital investments into environmental protective measures;
 K_{at} --additional capital investments needed for achieving normal operation of the environmental protective projects at year t of their operation ($t = 1, 2, 3, \dots, T$);
 C_{ct} --current expenditures of year t for the operation and upkeep of fixed capital;
 E_{rf} --the normed reduction factor for expenditures made at different times (temporarily prior to the approval of the sectorial instructions by the USSR Gosplan, the reduction factor has been set at 0.08 for ordinary expenditures and 0.03 for expenditures on replanting forested areas).

D. Determining the Economic Effectiveness of Capital Investments in the Distribution Sphere

59. In determining the economic effectiveness of capital investments in the distribution sphere, the functions of a production and nonproduction nature should be isolated. Since the value created by labor related to functions of a production nature is reflected in an increase in the value of the sold commodities and in a rise of national income, this makes it possible to determine the effect obtained from the capital investments into the distribution sphere. The amount of the effect is determined by the total of the trade rebates (surcharges) minus the payment for services of other national economic sectors and material expenditures comprising the overhead.

60. The calculation of the overall (absolute) effectiveness of capital investments into the distribution sphere (Z_d) considering the national income created in it can be carried out according to the formula:

$$Z_d = \frac{C_t - Y_t - M_t}{K}, \quad (18)$$

where: C_t --the total realized trade rebates or surcharges;
 Y_t --payment for services of other national economic sectors;
 M_t --material expenditures as part of overhead.

61. The overall effectiveness of capital investments into the individual enterprises of material and technical supply, procurement and trade is determined for the profitability indicator using the formula:

$$z_p = \frac{C_t - I_d}{K}, \quad (19)$$

where: I_d --total of overhead.

62. The variations are selected using the minimum of adjusted expenditures and in calculating these the overhead is used as the current expenditures (cost). In addition, it is also possible to use additional technical and economic indicators such as a calculation of the demand for work areas in stores, warehouse areas, refrigeration capacity, fruit and vegetable storage capacity, procurement point and other facilities on the basis of the current rates of the trade and warehouse network per 10,000 inhabitants; it is possible to use also the cost of constructing a unit of capacity in this network on the basis of one worker or planting place, per square meter of warehouse area and so forth.

63. In determining capital investment effectiveness in the distribution sphere, consumption outlays are considered and a portion of these are the expenditures of time by the population on acquiring goods. The economic estimate for these expenditures is made proceeding from a norm of 0.5-0.7 ruble per hour according to Point 49 of the current procedure. In those instances when the existing trade network does not provide normal services for the public, the indicator for consumption outlays should be given preference over the other indicators for the economic effectiveness of capital investments.

64. Along with the savings in time, in selecting the variations of trade services for the public, consideration is given to the following:

- 1) The breadth of the assortment of goods and the number of assortment possibilities shown to the consumer;
- 2) Ensuring the proper commodity appearance and safekeeping of the quality of the goods; in public dining enterprises, the quality of the prepared food;
- 3) Providing convenience for the customers in selecting and making up the purchases and the presence of additional forms of customer services;
- 4) The observance of the labor hygiene and safety requirements for the trade workers.

These characteristics of the work quality of trade enterprises are indicated as supplementary ones in assessing the effectiveness of capital investments into the distribution sphere.

E. Determining the Economic Effectiveness of Scientific Research and Designing

65. The calculations of economic effectiveness are carried out for scientific research projects which are aimed at developing new production processes, machines and

materials and raising the level of the social organization of the economy as well as for research in the area of natural sciences which can be used to improve material production.

In calculating the economic effectiveness of scientific research, along with the expenditures of the scientific research institutes, consideration is given to the outlays related to the introduction of the results of this work.

66. The scientific research for which the economic effect is calculated includes the following:

- a) Work directly aimed at the development of new production processes and methods in industry, construction, agriculture and other national economic sectors; at developing new sets of machines, mechanisms, automation, instruments and equipment, at improving the designs, parameters and qualities of the product; at creating and introducing new types of energy, new materials, new substances and preparations; at creating new types of enterprises, buildings, installations and structural elements; at creating production and urban development complexes;
- b) Work to improve the level of the social organization of the economy, that is, to improve the intersectorial and intrasectorial proportions, transport systems, the placement of the productive forces, the improvement of the organization of production management, the creation of associations, territorial-production complexes, agroindustrial complexes, the creation and introduction of norms which regulate the social organization of production (norms for the length of construction, specific capital investments, engineering standards for designing and so forth), for the development of specialization and cooperation and for improving the economic mechanism;
- c) Research in the area of economic and social sciences which can be used for increasing the efficiency of social production;
- d) Research in the area of fundamental sciences such as mathematics, physics, chemistry, biology and others and which is of a theoretical nature but can also be used for improving material production.

67. The estimate of the economic effectiveness of the results of scientific research is carried out on the basis of determining the following:

- a) The economic effect in comparison with the highest achieved level of science and technology for ascertaining the advisability of introduction;
- b) The overall amount of the economic effect which is achieved as a result of introduction, in comparison with the planned or actual level of the technology considering the scale, the time of introduction and the economic life of the scientific result considering "obsolescence";
- c) The economic and technical indicators which should be achieved in order that the proposed measure be effective;

d) The effectiveness of the work of the scientific organization as a whole or the group of scientific research organizations.

As a basis for comparison (the standard) the following are used:

a) In determining the economic effectiveness--the higher level of technology introduced, being designed or in the stage of completed scientific research in the USSR and abroad;

b) In determining the amount of the economic effect from introduction--the level of the equipment to be replaced and this level should be reached by the moment the given scientific research is introduced into production.

68. As a result of scientific research an economic potential is created and this potential is realized in keeping with the introduction of the results of scientific research into production. The economic potential of scientific research is measured by the maximum economic effect which can be achieved on the basis of introducing of the results of this work into production over the calculated period which the proposed amount of introduction. Also assumed is a change in the economic potential timed to a certain year of introduction.

If the scientific research entails the risk of obtaining a negative result, then the economic potential is determined as a mathematical expectation using the formula:

$$Z = Z_t \cdot p - B \cdot q \text{ with } p + q = 1. \quad (20)$$

where: Z --the economic potential of the scientific research involving the risk of a negative result;

Z_t --the calculated economic potential over a period of t years;

p --probability of a positive result from the research;

B --surplus expenditures in the event of a negative result;

q --probability of a negative outcome from the scientific research.

69. Prior to turning over the results of scientific research for introduction into production, a number of expenditures are made and these are reflected neither in the product production costs or in the capital investments. However these should be considered in a comprehensive assessment of the effectiveness of scientific research. These preproduction expenditures generally speaking consist of the cost of the following work:

a) Scientific research;

b) Experimental long-range designing;

c) The designing of experimental equipment, apparatus and instruments;

d) The manufacturing and testing of test models in the process of scientific research;

e) Experimental industrial production or experimental construction required to test the results of the scientific research. The preproduction expenditures

carried out at different times are reduced to a comeasurable amount for the first year of introducing the results of scientific work into production both for the new and for the initial variations.

70. The effectiveness of expenditures on long-range comprehensive scientific production programs is determined on the basis of calculating the integral effect over the time of implementing the program and the subsequent effective use of its results.

71. The calculations of the economic effectiveness of scientific work are made in the course of drawing up the long-range and annual plans at the scientific research organizations in working out the programs and drawing up reports.

In the initial stage of scientific research, the calculations of economic effectiveness are made with a certain amount of approximation, and in the following stages of designing, engineering, testing, the development of production and so forth, the calculations must be systematically adjusted in checking to what degree the actually achieved and technical indicators correspond to the calculated ones.

72. In assessing the effectiveness of scientific work aimed at improving material production, along with the economic results it is also essential to disclose the social results not fully reflected in the value estimate. These are:

- 1) The elimination of heavy physical labor, the greatest possible improvement in the health conditions and easing of working conditions;
- 2) A rise in the level of safety procedures;
- 3) An improvement in the working and living conditions of the population;
- 4) A combining of accelerated technical progress with full employment of the entire work-age population;
- 5) The elimination of industrial injuries and professional illnesses and so forth.

73. In assessing the effectiveness of design solutions, as indicators the following are used:

- 1) The cost of the annual product volume or a unit of product (for production enterprises);
- 2) Annual operating expenditures, including amortization on full replacement (for projects in the nonproduction sphere);
- 3) The full estimated cost of construction, reconstruction and technical reequipping;
- 4) Proportional capital investments per unit of product per year (or per unit of net product);
- 5) Expenditures on transporting the finished product to consumers;

6) The related expenditures and results achieved in related sector.

74. For an analysis of the factors involved in raising effectiveness and for a fuller scientific and technical soundness in comparing the design decisions, additional indicators are used such as labor productivity in terms of net product, the use of production areas and fixed productive capital, proportional consumption of raw products and fuel-energy resources per unit of end product of the enterprise and others. The list of additional indicators is given in the sectorial instructions.

V. Determining the Actual Effectiveness of Capital Investments

75. Determining the actual economic effectiveness of capital investments is aimed at checking the effectiveness of expenditures made to build new enterprises and projects as well as expand, reconstruct and technically reequip existing ones in addition to carrying out systematic control over to what degree the actual indicators correspond to the design calculations and the planning quotas in terms of the economic effectiveness of the capital investments broken down for the individual projects, enterprises, associations, sectors and the national economy as a whole.

In determining actual effectiveness, the report indicators are compared with the design and normative ones. This is essential both for supervising the observance of the design parameters as well as for checking the quality of design and estimate specifications and, in particular, observing the set norms. It is also essential for preparing proposals to improve design and estimating work and the normative base of capital construction.

76. The indicators for the actual economic effectiveness of capital investments are calculated for the individual projects, enterprises and associations, subsectors and sectors. The calculations are made using comparable prices. The overall (absolute) and comparative economic effectiveness of capital investments is determined at the given stage of reaching designed capacity and attaining other planned economic indicators.

77. The overall effectiveness for the enterprises (projects) and their groups is determined by comparing the increase in net product (profit) with the capital investments which have caused this increase according to the actual expenditures. The indicators of overall effectiveness provide an opportunity to determine the return from expenditures on construction.

Comparative effectiveness is calculated for disclosing a decline or increase in effectiveness for the given enterprise in comparison with other enterprises. The calculations of overall and comparative effectiveness complement each other and are equally essential in analyzing the actual economic effectiveness of capital investments.

78. In analyzing the overall (absolute) actual economic effectiveness of capital investments into construction, expansion and reconstruction on a level of individual enterprises and projects, as the basic indicator it is possible to use the coefficient of effectiveness (profitability).

The capital investments made can be considered economically effective when the obtained indicators equal or surpass the normed ones. Here, a sectorial norm can be used as a norm for a group of enterprises.

79. The indicator of an integral effect is also calculated in the form of the time during which the algebraic total of the effect has reached the amount of expenditures on the construction, expansion or reconstruction of the enterprises (the conditional capital investment repayment time).

For calculating this indicator it is possible to use data on profits and losses from the beginning of putting the newly constructed or reconstructed enterprise into operation.

80. In the process of analysis, one should ascertain, if at all possible, the influence of the following factors on the actual effectiveness of capital investments: the time gap between the making of the capital investments and the obtaining of an effect, the acceleration of the completion and reaching of the design indicators, the concentration of capital investments and so forth as well as the rise in the level of the technical equipping of the enterprises, the growth of labor productivity, the improvement in product quality and so forth.

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RESOURCE UTILIZATION AND SUPPLY

GOSSNAB'S PARTY MEMBERS BLAMED FOR ITS POOR PERFORMANCE

Moscow SOTSIALISTICHESKAYA INDUSTRIYA in Russian 30 Nov 80 p 2

[Article S. Volkov and A. Soloshenko: "The Party Committee and the Discipline of Execution"]

[Text] The reporting and election campaign in party organizations is always a crucial period in the life of the party. But its importance is especially great during the pregress period. As Comrade L. I. Brezhnev said in a speech at the October (1980) CPSU Central Committee Plenum, "at the meetings and conferences all aspects of the activity of party organizations are examined in a businesslike manner, pointedly and self-critically, oversights and shortcomings are exposed, everything favorable is supported." We approached the analysis of the recently held reporting and election conference of the party organization of USSR Gossnab precisely from the standpoint.

The role and importance of this central department in the management of the economy of the country are enormous: today three-fourths of the volume of products being produced, the total list of which exceeds 20 million descriptions, pass through the sphere of material and technical supply. On the scale of the national economy USSR Gossnab annually organizes up to 1 billion ties for deliveries of products for consumption in production. The solution of these large-scale problems is inconceivable without the continuous increase of the efficiency and quality of work and requires great responsibility and executive discipline.

The central staff of the committee and its party organization are doing much to improve material and technical supply, to improve the style and methods of the work of its organs on the selection, placement and training of personnel and on the tightening up of party and state discipline. However, the present state of affairs in material and technical supply and the complicated problems which the national economy is working on today oblige the communists and all the workers of USSR Gossnab to analyze and evaluate their work critically and to seek new ways and means to improve it.

In the accountability report which Secretary of the Party Committee of USSR Gossnab N. Tarapanov delivered it was stated: "In evaluating the activity on monitoring the implementation of decrees and decisions and the degree of exactingness toward communists, the party committee should admit that it did not achieve the necessary results." Such a stern and fundamental assessment by the party committee of its own

work on tightening up the executive discipline of communists forced many conference participants to look at the activity of all the units of the central staff of USSR Gosplan and of the party organizations from a critical standpoint. It only has to be regretted that not everyone was imbued with this spirit: in the speeches of several delegates self-criticism was heard in the most general form or was altogether absent, and in the accountability report, as soon as the work of the administrations of Gosplan was turned to, the critical tension weakened appreciably.

The party calls for a considerate attitude toward personnel, for their instruction and training, while simultaneously increasing the responsibility of the workers for the assigned job and the exactingness toward them. In principle the party committee took the correct direction here: joint meetings of the bureaus and meetings of the primary organizations of the administrations became firmly established in the practice of party work, their role in coordinating the efforts of the communists of different subdivisions increased, the party committee regularly heard reports of the executives of the administrations and set up monitoring of the implementation of decisions.

The party committee also actively strove to increase the executive discipline of the communists in solving operational questions of the saving of material resources and the skillful management of them. On its recommendation the Administration of Supply and Intersectorial Relations on Metals and Metal Articles jointly with the sectorial ministries sought means to additionally commit to the economic turnover 350,000 tons of rolled products, 220,000 tons of pipe and 44,000 tons of metal products.

Unfortunately, the policy of the party committee of increasing the coordinating role of the administrations of Gosplan in the management of the national economy was not developed extensively. Some workers of the central staff and on the local level still attempt to regard Gosplan as an organization which gives advice and makes decisions, and not as a unit of the management of the economy, which bears direct responsibility for the supply of production with the necessary resources and for the assurance of its smooth operation.

The speech of V. Kovalenko, secretary of the party bureau of the transportation administration of Gosplan, is significant from this point of view. He correctly criticized the sectorial ministries and several subdivisions of Gosplan for shortcomings in the organization of efficient transportation. At present the enterprises of the USSR Ministry of Ferrous Metallurgy annually transfer more than 14 million tons of metal from the European part of the country to the east, while they transfer nearly twice as much in the opposite direction. It is clear that both intrasectorial cooperation and the rationalization of the traffic patterns must be taken up in earnest. Who should do this and how? Judging from the speech of Comrade Kovalenko, the transportation administration of USSR Gosplan does not have a program of active interference in the established intrasectorial and intersectorial cooperation, so as to eliminate from economic practice crosshauls of millions of tons of metal, timber, fuel and construction materials.

Such a form of work as the reports of communists at the meetings of the party committee of Gosplan and the party bureaus of the administrations received a favorable rating at the conference. Already 200 leading workers have rendered account to the

party. Chief of the Administration of the Supply of Fuel and Energy Resources to the National Economy Ye. Zhevago, for example, was rebuked at the meeting of the party committee. The communists of the administration took the critical remarks and recommendations of the party committee correctly and drew the proper conclusions. The search for reserves to save fuel and energy resources became the most important task of each communist and the entire party organization of the administration, while the questions connected with it were examined after this with a more thorough analysis. The business contacts of the workers of the administration with the sectorial ministries and scientific research institutes were also strengthened.

But the party committee of Gossnab did not always have enough consistency and exactingness. The report of the communist A. Baklanov, chief of the Administration of Supply for Lumber and Paper Products and Packaging, for example, was heard. The poor work, low executive discipline and the failure to execute the decisions of the collegium of Gossnab were noted. So what? In its accountability report the party committee was forced once again to note the same shortcomings in the work of the communists of the administration.

This case, unfortunately, is not an isolated one. The question of the implementation of the measures stipulated by the decree of the party and the government on the improvement of the economic mechanism was pointedly raised at the conference. This is also understandable: party and economic organs do not have now a greater concern than the successful accomplishment of the planned reorganization. This process is a complicated and very crucial one, which requires adherence to principle and boldness in the adoption of what is new. However, as was noted at the conference, these qualities are not fully displayed in the staff of Gossnab.

It must be noted that initially the party committee started working actively: they discussed the decree of the CPSU Central Committee and the USSR Council of Ministers on the improvement of the economic mechanism at the meeting of the aktiv (SOTSIALISTICHESKAYA INDUSTRIYA wrote about this in detail in the issue for 11 September 1979) and elaborated the appropriate measures.

After a while the progress of the fulfillment of what had been planned was examined at a meeting of the party committee. In particular, the party committee analyzed the work of the communists of the Technical Administration on the completion of the changeover of associations and enterprises to supply via direct long-term economic ties. It turned out that the administration was not fully coping with the task assigned to it. But the decisions of the party committee did not become instructive either for the workers of the Technical Administration or for the communists of other subdivisions, who were responsible for the fulfillment of this item of the decree. So it had to be stated in the accountability report: the party organization of the Technical Administration had not implemented business cooperation with the party organizations of the intersectorial administrations, which were not performing actively and purposefully enough the work with the appropriate ministries on the improvement of deliveries on the basis of direct ties.

Effectiveness of the complex administrative mechanism is inconceivable without initiative at all levels and first of all in the management unit. Red tape, unnecessary agreements and thoughtless waits for instructions "from above" cost too

much. In the speeches of the conference participants it was noted that the desire to assume full responsibility for the making and implementation of administrative decisions is not felt in some subdivisions of USSR Gosnab. Apparently, precisely this explains the fact that at the conference the communists avoided the problems connected with the development of Western Siberia. The provision of Siberian enterprises and construction projects with everything necessary is one of the most important tasks of the organs of material and technical supply, emphasized deputy chief of a department of the CPSU Central Committee N. Lobachev. He spoke at the conference. However, the organs of Gosnab so far have not given pleasure by particular successes. In Western Siberia there is not enough metal, lumber, cement, paints. However, it is simpler to enumerate what is being received in the full amount and on the set dates.

The speech of Chairman of USSR Gosnab N. Martynov was filled with critical assessments and weighty complaints against the work of the central staff. The attention of the delegates was riveted on the most important tasks of today and the problems which have to be solved in the future, the need to increase the organizing role and the responsibility of supply organs was indicated. The backing of the start-up program of the five-year plan and the promotion of the fulfillment of the pre-congress socialist obligations by the labor collectives of all sectors of the national economy are now being placed in the forefront. The preparation for the operation of industry under winter conditions, the speeding up of the supply of housing construction and the provision of the material and technical resources for the plan of the initial year of the 11th Five-Year Plan are among the urgent tasks.

It is clear that these problems can be solved successfully only on the basis of the utmost tightening up of executive discipline.

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REGIONAL DEVELOPMENT

PROBLEMS OF COORDINATING REGIONAL DEVELOPMENT ANALYZED

Sectorial, Territorial Development

Moscow EKONOMICHESKIYE NAUKI in Russian No 1, Jan 81 pp 3-10

[Article by Candidate of Economic Sciences V. Sigov and G. Karpova (Leningrad):

"The Problem of Combining the Sectorial and Territorial Development of the Economy"]

[Text] The goal of improving the combination of sectorial and territorial development was set in the decisions of the 25th CPSU Congress. For these purposes it was envisaged to ensure the more complete interconnection of the sectorial and territorial principles of planning and to improve the comprehensive planning of economic and social development at enterprises, associations, in regions and cities. During the 10th Five-Year Plan these instructions of the party were embodied in real life. The economic rights of local soviets were broadened by the USSR Constitution to improve the combination of the sectorial principle of management with measures of the comprehensive development of regions. According to Article 147 of the Constitution now in effect, the local soviets of people's deputies ensure within the limits of their powers the comprehensive economic and social development on the corresponding territory; coordinate and monitor the activity of enterprises, institutions and organizations of superior subordination in the area of land use, nature conservation, construction, the use of manpower resources, the production of consumer goods and consumer service. The laws of the USSR and the union republics on the local soviets of people's deputies detailed the provisions of the USSR Constitution and the constitutions of the union republics on the competence of the local soviets, regulating the legal bases of the strengthening of their role in the development of the economy of regions.

The increase of the importance of territorial administration was reflected in the decree of the CPSU Central Committee and the USSR Council of Ministers of 12 July 1979. The drafting and approval of consolidated five-year and annual plans of the production of local construction materials and the output of consumer goods, plans of housing, municipal, cultural and general construction, as well as the monitoring of the fulfillment of the indicated plans are entrusted to the local soviets. A number of measures on the efficient use of manpower and natural resources are called for in the decree, which will promote the overcoming of the existing conflicts between sectorial and regional interests.

In the speech of Comrade L. I. Brezhnev at the October (1980) CPSU Central Committee Plenum it was emphasized that only the center can efficiently manage the economy of the country as a unified national economic complex and can countervail departmental and regional trends. At the same, as is indicated in this speech, "for the normal functioning of the economy the initiative of the provinces, labor collectives and economic managers must be developed to the utmost."¹

The idea of the object of territorial administration and planning is changing on the basis of recently adopted standard documents. The transition from the examination of individual sectors of the national economy, which are of a local nature, to the distinction of the regional economy and the comprehensive study of the content of regional interests is taking place. At present it is a matter of the planning not of the local economy, but of the comprehensive economic and social development of administrative regions. Accordingly, RSFSR Gosplan has prepared the Procedural Instructions on the Drafting of Plans of the Economic and Social Development of Autonomous Republics, Krays, Oblasts and Sectors of Republic (RSFSR) Subordination, as well as the Procedural Instructions on the Planning of the Comprehensive Economic and Social Development of the City.

The establishment in the executive committees of the local soviets of administrations (departments) of capital construction and their performance of the functions of a single client with respect to the construction of objects of the social infrastructure in addition to a significant economic impact are making it possible to pursue a uniform urban development policy in the development of urban territories. In 1978 the USSR Council of Ministers adopted the decree "On Measures to Extend in Cities the Practice of the Comprehensive Flow Line Construction of Apartment Houses, Facilities for Cultural and General Purposes and Municipal Services," which is aimed at overcoming the lack of coordination in urban construction and reducing the number of sources of its financing.

Thus, during the 10th Five-Year Plan a number of necessary conditions for the successful combination of the sectorial and territorial development of the economy were created. This work will also be continued during the 11th Five-Year Plan. In the draft plan of the CPSU Central Committee for the 26th party congress, "The Main Directions of USSR Economic and Social Development for 1981-1985 and the Period to 1990," it is envisaged "to implement measures aimed at the overcoming of departmental dissociation and the proper combination of sectorial and territorial administration."²

The problem in question is among the most important, and it arose in connection with the prevalence of the sectorial principle of management in the national economy. The changeover to the sectorial principle of the management of the economy, which at one time made it possible to solve a number of vital problems of the development of the national economy, led to the excessive extension of the competence of sectorial organs. In practice this often results in substantial adverse consequences, particularly the hypertrophied growth of some cities, the stagnation of others and the one-sided development of still others. In spite of the significant number of small and medium-sized cities in the RSFSR (more than 300), which have favorable conditions for the location of industry, ministries and departments are striving to build new enterprises in large cities and to reduce the outlays on the development of the regional infrastructure. In this case the national economic

impact is being replaced by the sectorial impact to the detriment of regional interests. The excessive concentration of production in large cities, on the one hand, complicates the planned development of the entire network of settlements and the leveling of territorial differences in the social conditions of life and, on the other, leads to a worsening of the qualitative characteristics of the natural environment of both the cities themselves and the territories adjacent to them. In the case of the sectorial approach, settlement is a simple function of the location of production, as a result of which so-called departmental settlements attached to a plant or a mine arise with all their shortcomings in the sphere of consumer service, in civic improvement and in the utilization of manpower resources.

Ministries and departments have the capital not only for the development of their own production facilities, but also for the construction of auxiliary and service enterprises, including nonproduction facilities. The aspiration of ministries and departments to "naturalize" the economy in their jurisdiction complicates the pursuance of a uniform technical policy in the sectors and hampers the solution of the problems of the comprehensive development of regions. As a result a situation forms, in which a significant portion of the local economy (primarily objects of the social infrastructure) is not under the jurisdiction of the local soviets. Thus, according to the data of the RSFSR Ministry of Housing and Municipal Services, only 35.3 percent of the socialized housing is at their disposal. As a result a gap appears between the rights of territorial organs of administration and the possibility of exercising these rights. The division of the designing, construction and operation of the regional infrastructure among sectorial and territorial organs leads to imbalances in the economic structure of regions and to the inefficient utilization of their resources and gives rise to a large number of other adverse consequences.

The operation of departmental housing is more expensive and is carried out most often in an unskilled manner, the plans of its major repair are not fulfilled. The departmental dissociation of housing and municipal facilities leads to a lag of municipal services behind housing construction, since ministries participate very reluctantly in the construction of citywide engineering works. Children's preschool institutions, clubs, sports facilities, polyclinics, hospitals and other service facilities are also carried on the balance sheet of enterprises. The existence of a departmental sector in the social infrastructure of regions, in strengthening the not always valid differentiation in the distribution of important social benefits depending on the different economic potentials of enterprises, leads to an increase of the unjustified turnover of personnel. The transfer of departmental housing and service facilities to the local soviets will strengthen their role in the management of the living conditions of the population and will create the necessary conditions for the comprehensive development of regions. For this the procedure of allocating capital investments for residential housing construction should be changed.

At present only a part of the assets for the development of the social infrastructure are allocated from local budgets. Their bulk is received through sectorial channels, including deductions for the social infrastructure from the construction of production facilities, the assets of the funds for sociocultural measures and housing construction of enterprises and organizations and centralized capital investments along the line of the service sectors. The prevalence of the departmental principle of the planning of these capital investments leads to their dispersal, the development of small-capacity construction organizations and the uncoordinated development of cities. At the same time the concentration of capital in the hands

of sectorial organs causes a disparity of the amounts of capital investments, which are being allocated for production and nonproduction construction. The ministries and departments are responsible for the solution of production problems and are not devoting proper attention to the construction of objects of the social infrastructure, are trying to shift these duties as much as possible to the local soviets, which do not have the necessary material, financial and construction base and cannot ensure an adequate level of development of the regional infrastructure. In the end this has the result that great difficulties also form in the solution of production problems: the enterprises being put into operation experience an acute shortage of manpower, and hence the freezing of assets, the lengthening of the period of assimilation of production capacities and the receipt of an insufficient amount of the necessary products by the national economy.

The specialization and comprehensive development of the economy of regions are closely interconnected aspects of the process of the planned territorial division of labor. The study of the questions connected with them requires, in particular, clarity in the definition of the concept "the comprehensive development of regions." In our opinion, /the comprehensive development of regions should be understood as the self-satisfaction of needs which is economically expedient within them/ *[in italics]*. Such a development of regions is connected not only with the achievements of the local economy, but also with the efficient use of regional resources. The latter is the basis for the economic development of regions. The violation of this principle limits the possibilities of the development of the local economy and worsens the qualitative characteristics of the natural environment and, consequently, the social conditions of the life of the population. In these matters the USSR Constitution provides for the coordination of the activity of enterprises of superior subordination on the part of the local soviets.

In such an interpretation, it seems to us, the concept of the comprehensive development of regions loses its vagueness and becomes constructive. If specialization expresses the particular, completeness expresses the general in the economy of regions. The social conditions of the life of the population are this general thing. Thus, the sectors which ensure the comprehensive development of regions embrace the social infrastructure, the construction base, which is involved in its development, and the economy, which meets the everyday needs of the local population. Regional specialization promotes an increase of the economic efficiency of social production, while comprehensive development aims it at the end social results. The goal of territorial administration at all levels is the identification of the intraregional needs for products and services, the receipt of which from other regions is not expedient. Whereas the development of the specialization of regions is the task of ministries and departments, questions of comprehensive development should be transferred entirely to the jurisdiction of the local soviets of people's deputies.

For the successful solution of the problem of combining the sectorial and territorial development of the economy it is important to explain with the necessary clarity the essence and functions of sectorial and territorial management under socialism.

The essence of the scientific management of socialist society consists in the use of the laws of its development. The latter are manifested through the activity of people, which is dictated by their interests. Therefore the path from the abstract

to the concrete in the area of the use of economic laws lies through the revelation of the content and interrelations of the interests of socialist society. Management should ensure the best combination of the interests and the meeting of the needs which are the basis for them.

Society and the individual are the main subjects of the interests under socialism. The interests of other subjects--classes, nations, labor collectives, territorial communities and others--are of an intermediate nature, although their realization is a necessary condition for ensuring the unity of the interests of society and the individual. The specific interests of social communities reflect a certain social heterogeneity of socialist society and the need to overcome it; being forms of the manifestation of national interest, they embody its various aspects.

Under the conditions of mature socialism the interests of society and the individual are mediated by two types of intermediate interests--sectorial (collective) and regional (local). The elimination of exploiting classes and the basic solution of the national question are placing in the forefront precisely these types of specific interests. The coordination of sectorial and regional interests should be organized so that they would not oppose each other. Then the public interest contained in them would also be realized.

Since the utilization of economic laws takes place through the realization of the interests of socialist society, the essence of sectorial management under socialism consists in the realization of the sectorial interest. The use of the principle of the sectorial organization of management provides the opportunity for the specialization and concentration of the output of products and services and leads to the development of the social division of labor. The specialization and concentration of production create favorable conditions for the complete mechanization and automation of technological processes and make it possible to manufacture less expensive and higher quality products. At the same time the complete mechanization and automation of production, service and management improve working conditions and enrich its content. Thus, the centralization of the management of a specific function of social reproduction serves as an important means of achieving a high organizational and technical level of the output of products and services and a high end result of production. However, for this the sectorial principle of management requires the maximum concentration of the sector in the corresponding ministry and its pursuance of a uniform technical policy.

In order to ensure the combination of sectorial and regional interests, the technical policy in sectors should be aimed at increasing the efficiency of the use of material and manpower resources.

Environmental pollution appears as the most acute form of the conflict of sectorial and regional interests. At present conditions ensuring a sufficiently great interest of ministries and departments in the efficient use of nature have begun to form in the economic mechanism. The introduction at the expense of the production cost of a fee for the water taken in by industrial enterprises from water management systems, which is called for by the decree of the CPSU Central Committee and the USSR Council of Ministers, "On Improving Planning and Strengthening the Influence of the Economic Mechanism on Increasing Production Efficiency and Work Quality," can be grouped with them. The increase of the efficiency of the use of material resources

in addition to a direct economic impact will also provide a large environmental protection impact, by reducing the amount of waste released into the environment. Therefore it is much more suitable to solve the problem of the supply of production with raw materials not by increasing their extraction, but on the basis of the complete utilization of minerals, the decrease of the rates of consumption of raw materials, fuel and materials for obtaining the final product and the extensive use of secondary raw materials. Given the limitedness of the majority of natural resources, the ecologization of production is the most important direction of scientific and technical progress, which ensures both the greatest degree of economy of production and the preservation of healthy living conditions of the population. For this the evaluation of the activity of ministries and departments should be made with the mandatory consideration of the ecological aspect, which in turn will promote the resolution of the conflicts between sectorial and regional interests.

The enterprise of any sector has opportunities for the more efficient utilization of raw materials and, consequently, can make a contribution to the development of a waste-free production system. The ecologicalness of production, by which its conformity to the demands of the efficient use of nature should be understood, reflects most completely the utilization ratio of substances. It is the ratio of the total weight of the commodity output being produced to the weight of the substance used in producing it.³ The indicator of the use of substances as the main indicator of the ecologicalness of production and, consequently, of its scientific and technical level should be of an instructional nature and be a fund-forming indicator. For enterprises, associations and ministries this would be a necessary incentive for the improvement of the production technology, the development of circulating water supply systems and the complete utilization of natural resources.

The increase of the efficiency of the use of manpower resources is also one of the decisive factors of the harmonious combination of sectorial and regional interests. The increase of labor productivity in the sectors of specialization makes it possible to redistribute the manpower resources of regions in favor of services, improving thereby the social conditions of life of the local population.

The main economic law of socialism dictates the need for the territorial equalization of the social conditions of life, the creation of equally favorable conditions of the satisfaction of needs for all members of society. During the 11th Five-Year Plan and in the future to come the urgency of these problems will increase more and more.

The essence of territorial management under socialism consists in the realization of the interests of territorial communities, at the basis of which is the need for living conditions which conform to the achieved level of development of society. The regional interest as a form of the manifestation of national interest reflects the need to overcome the substantial differences in the social conditions of life over the territory of the country. Its function in the process of social development consists in this. The organs of territorial management should bear responsibility for the exercise of this function. However, under the conditions of the sectorial principles of the management of the economy they do not have the resources necessary for this, and a part of the responsibility for the formation of the living conditions of the population of regions rests on the ministries and departments of the production sphere, for which these questions are secondary. As a result the

realization of regional interests is complicated, which in turn affects the realization of the entire system of interests of socialist society.

The need for the proper combination of sectorial and regional interests, the realization of which is interdependent, raises the question of changing over from the strictly sectorial principle of the management of the economy to the principle of the consistent combination of sectorial and territorial management in the efficient distribution of planning goals and resources among sectors and administrative regions. This presumes the use of a system of dual subordination with respect to all enterprises, institutions and organizations of local significance and the allocation of the capital investments intended for residential housing construction according to the territorial principle, that is, directly to the executive committees of the local soviets, bypassing the ministries and enterprises.

Dual subordination makes it possible to take local conditions into account in the management of sectors of local significance. Subordination vertically ensures the consideration of sectorial interests in the activity of enterprises, institutions and organizations, while subordination horizontally ensures the consideration of regional interests. Dual subordination does not mean the coincidence of the powers of the organs of management. A clear-cut division of labor and responsibility among territorial and sectorial organs is necessary. It is advisable to leave questions of technical policy to the ministries of local sectors, which have a scientific and production staff; it makes sense to grant the right to determine the volume and list (assortment) of the output being produced and the services being rendered to the executive committees of the local soviets, which carry out the material supply of enterprises of dual subordination and have information on the local needs.

The organization of capital construction is the most important direction of the work of the local soviets, which enables them to influence directly the living conditions of the population and really broadens their opportunity in the management of socio-economic processes. In conformity with legislation the local soviets organize the construction of the objects of the social infrastructure at the expense of the assets of the local budgets; resolve with the consent of enterprises, institutions and organizations questions of the joint use of their assets, which are allocated for nonproduction construction, as well as the pooling of assets in necessary instances; act as the client or specify a client for residential housing construction.

A number of transitional stages are needed for the establishment of unambiguous responsibility for the comprehensive development of population centers and the engineering preparation and equipment of construction sites. The pooling of the assets of all small clients with the temporary retention of the functions of the clients by several of the largest enterprises, which perform a large amount of the production and nonproduction construction, is possible at the first stage. At the second stage, with the creation of the construction base, its organization according to the territorial production attribute and the gaining of practical experience, the functions of a single client can be transferred to the executive committees of the local soviets. The centralization within the given territory of all the financial assets being allocated for the development of the sectors of the social infrastructure provides the conditions for comprehensive development and blocks attempts to

"naturalize" its services on the part of individual ministries. At the third stage in conformity with the principle of the combination of sectorial and territorial management the imperfect form of matching participation should be replaced by the territorial principle of the distribution of the fund of nonproduction accumulation.

The direct transfer to the executive committees of assets for the development of the social infrastructure will make it possible to overcome the disparity of the amounts of capital investments, which are being allocated for production and non-production construction, and to ensure proportionality in the development of the economic structure of regions. A reserve of available housing should be formed for the local soviets at the expense of the assets received additionally for these purposes for the enterprises being located on their territory.

Thus, the use of the principle of the combination of sectorial and territorial management will make it possible, on the one hand, to bring the rights of the local soviets in line with the possibilities of their exercise and, on the other, to focus the attention of sectorial organs of management on questions which are within their competence.

The changeover to the principle of the combination of sectorial and territorial management will require the development of an adequate system of planning. The existing methodology of drafting state plans rests on the resource-sector principle, which governs the balanced planning of material, financial and manpower resources with a breakdown by sectors (departments). At the same time territorial planning is basically a summary of sectorial drafts and indicators, which does not conform to the essence of territorial management under socialism and to the program-goal approach to planning.

The practice of compiling comprehensive plans of economic and social development arose as a means of resolving the conflicts between sectorial and local interests in connection with the objective need for the development of a planning mechanism of the implementation of the main economic law. The plans of the social development of labor collectives reflected the increase of the role of the personal factor of production. The plans of the economic and social development of administrative regions were brought about, on the one hand, by the need to equalize the opportunities of enterprises of different size in the area of social development and, on the other, by the lag of the regional infrastructure behind the development of sectorial works and by the inadequately efficient utilization of regional resources. However, the retention of the resource-sector principle of planning is having the result that the breakdown of sectorial plans by territories remains the basis of the formation of the comprehensive plans of administrative regions, and the development of the sectors of specialization of the regions is understood as economic development. Thus, the replacement of comprehensive territorial planning by consolidated planning with the violation of the principle of the address nature of plans is taking place.

There are two main levels of territorial planning and accordingly two groups of problems of the planned regulation of territorial development: the planning of the development and allocation of manpower (which is simultaneously the planning of regional specialization) and the planning of the comprehensive development of administrative regions. Multisectorial organs (first of all USSR Gosplan and the

Complans of the union republics), which determine the interregional proportions of socio-economic development and solve questions of the improvement of the territorial division of labor, ensure a territorial approach when drafting the plan of the economic and social development of the country. The plans for economic regions, zones and territorial production complexes are drawn up at this level. The planning of the comprehensive development of administrative regions should be under the jurisdiction of the soviets of people's deputies and should reflect the process of the planned satisfaction of the needs of the population.

Territorial planning is called upon, on the one hand, to define concretely the aims of the statewide plan on increasing the level of satisfaction of the needs of society in the given locality and, on the other, to inform the central planning organ about the territorial differentiation of the social conditions of life. In this connection it is possible to distinguish three stages of the planning of territorial development.

The first stage is the formulation of the goals of development and the determination of the degree of satisfaction of the needs of society. The information on the unmet needs of the population in each region serves as the basis for the thorough evaluation of the needs of society and for the making of decisions on the distribution of the assets of the fund of nonproduction accumulation among the regions. At this stage it is indicated to ministries and departments, in which regions they should develop their production. In order to ensure the best combination of sectorial and regional interests, when allocating productive forces the goal of equalizing the levels of economic development of the regions and of increasing the efficiency of the use of regional resources should be pursued (for example, when determining the sectorial composition of territorial production complexes the level of utilization of natural resources and secondary raw materials should be one of the most important criteria).

The second stage is the solution of the problems of the comprehensive plan of the region with allowance made for limitations which are objectively forming with respect to regional resources and the means of society. Comprehensive territorial plans should be plans of the all-round development of the material conditions of the life of the population and should reflect the planned level of approximation of the territorial standards of rational consumption.⁴

The third stage is the breakdown of the tasks of the comprehensive plan of the region by sectors of regional significance and the elaboration of a system of assignments and standards for specific enterprises, institutions and organizations. Limitations on regional resources (limits on the number of workers, the permissible amounts of water consumption and the discharge of sewage, emissions of harmful substances into the air, the size of sites for production facilities and others) with allowance made for the efficient distribution of these resources among the users should be established for the sectors of specialization. The problems of choosing the most efficient means of fulfilling the plan assignments with the assigned resources are solved in the sectorial plans.

The system of comprehensive territorial planning, which has been organized in this way, by conforming to the essence of territorial management under socialism, will promote the assurance of the rational combination of national economic, sectorial

and regional interests and, thus, the solution of the most important problems of the management of the national economy of the mature socialist society.

FOOTNOTES

1. L. I. Brezhnev, "Rech' na Plenum Tsentral'nogo Komiteta KPSS 21 oktyabrya 1980 g. Postanovleniye Plenuma TsK KPSS" [Speech at the CPSU Central Committee Plenum on 21 October 1980. Decree of the CPSU Central Committee Plenum], Moscow, 1980, p 12.
2. PRAVDA, 2 December 1980, p 6.
3. See "Sokhraneniye okruzhayushchey sredy na osnove bezotkhodnogo proizvodstva" [Environmental Protection on the Basis of Waste-Free Production], Leningrad, 1977, p 14.
4. It is not obligatory to regard the system of territorial standards as plan assignments, the fulfillment of which should be arranged for some specific date. Rather, they are guidelines which ensue from present notions about rational consumption. Since these notions change, the system of standards of rational consumption should also be revised. Territorial standards take into account: 1) natural conditions, 2) the demographic situation, 3) national features of the way of life, 4) the specific nature of settlement, 5) the functional orientation of the region (see "Kompleksnyy plan razvitiya sfery obsluzhivaniya naseleniya" [Comprehensive Plan of the Development of Consumer Services], edited by V. M. Rutgayzer, Moscow, 1977, pp 102-103).

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Comprehensive Regional Programs

Moscow EKONOMICHESKIYE NAUKI in Russian No 1, Jan 81 pp 48-54

[Article by Candidate of Economic Sciences M. Tarakanov (Irkutsk): "On the Question of the Methods of Elaborating Comprehensive Regional Programs (The Resource-Production Block)"]

[Text] The elaboration of territorial production goal programs is the most important unit of the improvement of the management of the national economy. Much attention is devoted to these questions in the materials of the 25th party congress. It is unquestionable that during the 11th Five-Year Plan they will also hold an important place in the system of measures on the development of the national economy.

As was noted at the November (1979) CPSU Central Committee Plenum, "during the next five-year plan it will be necessary to make major changes in the structure and proportions of the economy, to improve the established sectorial and territorial ties and to identify those links in which at the cost of the least outlays it is possible to obtain the greatest and a quick impact."¹ Such major changes should also be ensured on the basis of the comprehensive solution of the socio-economic problems of the development of individual regions.

In this area economic science is still faced with a number of complicated tasks on the elaboration of the principles of the formation and efficient operation of these complexes. The study of these problems is being conducted at a number of scientific institutions, including the Siberian Institute of the Economics and Organization of Industrial Production of the Siberian Department of the USSR Academy of Sciences.²

Some methodological questions of the elaboration of the comprehensive program of the development of the national economy of a region are set forth in this article. Such a program, as is stated in the Main Methodological Statutes on the Elaboration of Comprehensive National Economic Goal Programs, which were approved by USSR Gosplan, should be aimed "at the assurance of the comprehensive economic development of new territories or the transformation of established regions of the country, the formation and development of territorial production complexes (TPS's)."³ In our opinion, this program should consist of several interconnected subprograms (blocks): a) the resource-production; b) the social; c) the social-production infrastructure; d) environmental protection. The multisectorial resource-production subprogram, which reflects the goals and tasks of the region in all-union industrial production and therefore determines the scale of the development of other subprograms and the entire program as a whole, is the leading one here. Let us dwell in more detail on questions of the elaboration of this leading subprogram.

In the process of compiling the program it is necessary to include in the resource-production block such sections as: the assessment of the natural resources of the region; the analysis of the development of industry during the base period; the elaboration of a long-range plan of the development of natural resources and industrial development.

The possibility for the more thorough examination of the problems of resource supply and the industrial development of the region and the preparation of the basic data, which are necessary for interconnection with the other subprograms and, consequently, for the solution of questions of the entire comprehensive program, appears during the work on the named sections.

The assessment of natural resources is made by comparing the technical and economic indicators of their development with the average union and the best indicators for the country, as well as on the basis of the analysis of the union and regional balances. It is impossible, however, to limit oneself to technical and economic indicators. As a result of assessment the resources are broken down depending on the effectiveness of development and national economic value into groups with the distinction of unique resources, without which the problems of the development of the corresponding sectors of the national economy of the entire country cannot be solved. The level of the utilization of specific resources at present and the extent of their involvement in the national economic turnover in the future, at the end of the period in question are determined. The reserves of resources, which can be used for the development of the corresponding sectors of industry, are established on the basis of this.

Extensive information is used in the process of elaborating the comprehensive program of the development of a region. In particular, the data on the number of industrial personnel and the gross output of the industry of the region with a breakdown by administrative regions of the oblast scale, zones, territorial production

complexes, local administrative regions and cities are analyzed. The number of industrial personnel, who can be released during the future period in question as a result of the increase of labor productivity and can be sent to new enterprises, is taken into account.

Since the substantiation of the recommendations on the optimum development of natural resources and the choice of works (in conformity with the territorial potentials and the consideration of the impact of agglomeration) is the main task of the program, the work on determining the mutual influence of the sector and the territory should be included in the set of studies being conducted within the resource program.

The questions of the location of industry, as is known, are mainly being solved by sectorial ministries on the union and republic level, only individual small-scale auxiliary enterprises and shops are located by the local soviets. Only the sectorial design and scientific research organizations have the basic materials, which are necessary for the calculations connected with the location of enterprises, on the present state of the development of these sectors, the long-range need for products, technical progress and the technical and economic indicators.

The effectiveness of the location of an enterprise with allowance made for raw materials, power engineering, manpower resources, the consolidated indicators of the increase in the cost of construction and the expenditures on the shipment of products to consumers is determined by the design organization at the stage of technical and economic substantiation. But the technical and economic substantiation and the engineering assignment, as a rule, do not take into account (or inadequately take into account) the influence of territorial factors in the process of both the construction of the enterprise and its operational activity. Meanwhile, these factors often make very important adjustments in the term of construction, the assimilation of the production capacities, the attainment of the design indicators and, in the future, in the production efficiency. Therefore, studies which serve the determination of the mutual influence of the sector and the territory not only on the level of the region, but also on the scale of the individual large-scale industrial project, should be an important task of the analysis of the base period of the resource-production subprogram. In particular, the problems of the chemical and petrochemical complexes of the Angara-Yenisey Region, which are being formed, are very interesting on the scientific level. These complexes are characterized by high materials-output, power-output and capital-output ratios, require the creation of large production collectives and the availability of vast sites for the location of the enterprises themselves and housing construction, are the basis for the creation of urban settlements or promote their significant growth, and intensively influence the environment. Their direct and inverse ties with the territory on which they are located are incontestable, and the analysis of this mutual influence with the elaboration of recommendations on the elimination or moderation of the effect of adverse factors with the simultaneous increase of the effect of favorable factors can be of great scientific and practical importance.

At the present stage of the study of the problem in question within the research program it seems desirable to examine, first, the history of the formation of complexes, the present state of their development and the indicators of operational activity; second, questions of the interaction of the sector with the territory (the solution of the problem of the supply of raw materials; the site for the

enterprise and the city, the use of agricultural lands; financing and the assimilation of capital investments, the construction organization, the outlays on construction; the development of the regional infrastructure--the petroleum pipeline, the main rail line, interregional water supply, large-scale facilities, power facilities and so on--which serves the enterprise directly; manning and its influence on the assimilation of production capacities and operational activity; interaction with other sectors of industry of the city and the territorial production complex, the influence of the output on the development of the economy of the region; the influence on the environment); third, the influence of territorial factors on the process of the formation of the complex and its present operational activity.

The main and most complicated task of the subprogram is the elaboration of a plan of the development of industry for the long-term future. The proposals of the sectorial ministries, which are submitted by them to the central planning organs (USSR Gosplan and the Gosplans of the union republics) before the start of the long-term period, serve as the underlying basis for it. In the process of analyzing these proposals their conformity to the conception of the development of the region, the resource orientation, the strategy and the peculiarities of the development of industry with respect to both the sector and the territory are examined. The analysis concludes with the comparison of the need for resources (sectorial and intersectorial) according to the proposed plan with the potentials of the region.

The data on the long-range need of industry for manpower resources are turned over to other subprograms, after which the information on the need of the entire program for them is returned to the resource block. This need is compared with the long-range manpower resources of the region. In case of their shortage the need to reduce the production subprogram arises, an abundance of manpower resources makes it possible to raise the question of increasing it. The version with a shortage of manpower resources is most likely for the eastern regions of the RSFSR. In this case the following method of forming the production structure can be suggested.

The enterprises, the question on whose location has no alternatives, are determined on the basis of a thorough substantiation. There can be included among such enterprises: mining enterprises on the basis of resources, without the development of which the normal development of the national economy in the future period in question is impossible; enterprises which process resources having no alternative in those instances when their location owing to technological, transportation, fuel and power factors in other regions is clearly inefficient; enterprises at the stage of construction or expansion; enterprises, the construction which is necessary for the solution of urgent sectorial problems and should be conducive to a sharp increase of the efficiency of social production; enterprises which are necessary for the solution of pressing social problems; several others.

It is presumed that first of all the resources for both sectorial and intersectorial purposes should be allocated for the complete meeting of the needs of precisely these enterprises. At the next stage enterprises appear, which can be more efficiently located in the region from the standpoint of national economic interests, but at the same time can be built in other regions of the country as well. The question of the choice of the most efficient enterprises for the region in this case should be solved by comparing the technical and economic indicators. The Model of the Production Structure of a Region can serve as the main tool of such a choice

with allowance made for the resource limitations following the supply of enterprises having no alternatives with the necessary resources. The following data are being prepared for calculations using this model.

1. Capital investments and the additional number of personnel for enterprises which are newly being built and are being renovated (according to the arrangement of the sector) with a breakdown by zones, administrative regions of the oblast scale, territorial production complexes and centers of concentrated construction.
2. The indicators of alternative enterprises, which are necessary for calculations to determine the comparative efficiency of their location in the region, for the purpose of optimizing its production structure.

Under present conditions, when the Model of the Production Structure of a Region is still at the stage of experimental development, along with "model" methods traditional methods can also be used for solving problems of the optimization of the production structure of a region, particularly the selection of enterprises for inclusion in the long-range plan of its industrial development.

One of the main goals of the development of the industry of any region is the increase of the efficiency of social production by the involvement in the national economic turnover of its effective and abundant resources. In this connection, when selecting enterprises preference is given to those which are conducive to the active use of precisely those resources and at the same time to the saving of critical resources. For example, under the conditions of the Angara-Yenisey Region fuel, power and water resources can be mentioned as the first resources, manpower resources can be mentioned as the second resources.

The comparative effectiveness of the location of various enterprises can be clearly illustrated by means of the indicator of the saving or the increase of the cost of the expenditures connected with their location in the region in question as compared with other regions of the country per employed person according to the equation:

$$D_e = \frac{E_1 - E_2}{N_p} ,$$

where D_e is the difference in the expenditures per employed person; E_1 is the adjusted expenditures with allowance made for the attendant expenditures, which are connected with the location of the enterprise in the region in question; E_2 is the adjusted expenditures connected with the location of the enterprise in an arbitrary alternative region, the expenditures of which correspond to the average union expenditures; N_p is the number of personnel of the enterprise.⁴

This indicator has universality, which makes it possible to compare various enterprises of different sectors, and can also be used as a criterion in the tasks with respect to the Model of the Production Structure of a Region.

The selection of the most efficient enterprises will make it possible to obtain a long-range plan of the development of industry, which is balanced with the resources

of the region. However, in practice it does not take into account the influence of the impact of agglomeration, which is obtained in the case of the joint location of enterprises, as well as of several territorial factors. The bringing of the plan up to the standards which meet these requirements is the task of the next stage of its elaboration.

The analysis of the comprehensive development and location of production should serve the goals of determining the impact of agglomeration. Such an analysis can be made by examining the mutual influence of the individual enterprises within the territorial production complexes and industrial centers, which are being formed, and should take into account both the technological and raw materials ties and the infrastructural ties. The influence of these ties might be so substantial that they will make it necessary to raise in a completely different way the question of the expedience of the location of several enterprises. For example, the building of a motor vehicle complex in a region will make necessary the construction of a tire plant, while the building of large pulp and paper enterprises will make necessary the construction of a chlorine works regardless of the effectiveness of their independent location. The influence of large infrastructural objects, which make it possible to increase the level of economic development of the territory, is also very substantial. Thus, the construction of the Baykal-Amur Main Rail Line will make it possible to develop with incomparably fewer expenditures and more rapidly the petroleum and gas resources of the northern part of Irkutskaya Oblast, which in turn will improve the conditions of the development of industry there, and will especially promote the development of the petrochemical and chemical sectors.

The proper intraregional location of industry and the selection of enterprises for the recommended long-range plan, as was already noted, are impossible without consideration of intersectorial resources. The expenditures on these resources are formed under the influence of both regionwide and local factors. For example, in the Angara-Yenisey Region the determining regionwide factor of the formation of the expenditures on water is the presence of large rivers, on land--the possibility of developing the virgin land from under the forest, on manpower resources--their shortage and the high wage coefficients. And at the same time these expenditures within the region are different owing to the influence of local factors which are determined by the specific situation in each individual city. For example, on the territory of the Angara-Yenisey Region in Angarsk, Ust'-ye and Bratsk the best sites are at distances of only 0.5 to 2 km from such a mighty source of water supply as the Angara River, while in the region of Kansk and Zaozernyy they are 20-30 km from the comparatively small Kan River, for which the regulation of the flow will be required in the case of the location of a water-consuming enterprise. Given the overall shortage of manpower resources in the Angara-Yenisey Region in some cities (for example, Irkutsk and Chermkhovo) there are cases of a surplus of manpower. Thus, in different cities and even under the conditions of different sites the advantages and shortcomings of the region with respect to intersectorial resources may manifest themselves differently.

It is unquestionable that the information obtained as a result of the research both on the determination of the impact of agglomeration and of the conditions of cities with respect to intersectorial resources can make important changes in the long-range plan obtained as a result of the simple balancing of the sectorial proposals with the regional resources and can promote a significant increase of its effectiveness.

The adoption in the practice of the activity of planning organs of comprehensive regional programs of the development of the national economy of large economic regions is raising the demand for the making of the appropriate adjustments in the existing system of planning and management.⁵ In our opinion, these programs can yield the greatest impact, if they are elaborated and implemented by specialized territorial planning organizations. The question of their creation merits discussion.

At present the work on long-range plans is being carried out in practice as follows. The planning institutes of the sectorial ministries prepare long-range plans of the development of their sectors with a breakdown of the enterprises by union republics, large economic regions and administrative regions of the oblast scale (krays, oblasti, ASSR's). The mechanical reduction of the individual sectorial plans, which are attached to the territory of the region, also forms the long-range plan of its industrial development.

In the process of the operational solution of questions on the location of individual specific enterprises the ministries address proposals to the planning commissions of the oblast scale on the examination of its potential and expediency. The planning commissions, after examining the question of the location of the enterprise in the interdepartmental council jointly with representatives of the planning organizations, make the decisions and in case of a favorable result recommend a site. In the process of this examination the ministry obtains specific information on the conditions of the provision of the enterprise with grounds for construction, industrial personnel, water and other intersectorial resources. The industrial projects approved by the local planning organs are subsequently included in the long-range plans of the subsequent stages of planning, on the basis of which the drafts of the main directions of five-year plans and the drafts of detailed plans are drawn up.

Under present conditions at the stage of experimental research the main role in the elaboration of comprehensive regional programs belongs (and most likely for a long time to come will belong) to the scientific research economic organizations of the USSR Academy of Sciences and Gosplan. Their influence and effect on the elaboration of the long-range plan of the development of industry might be as follows.

The conception of the industrial development of the region is elaborated at the first stage of the work on such a plan. At the same time its primary tasks are determined: the natural resources liable to development, as well as the enterprises, which it is expedient to build on the basis of these resources or which are necessary for the solution of the most urgent problems which arose during the base period, are planned. The information on the conception and the primary tasks is sent to local planning and sectorial planning organizations. It provides the local planning organs with a method of selecting industrial projects which are conducive to the formation of an efficient production structure, helps the sectorial organs deal more strictly with their suggestions and promotes the decrease among them of the proportion of incidental projects which are inefficient for the region. It (the proportion) will decrease even more after the selection of the enterprises which are included in the recommended long-range plan.

The subsequent work on the formation of the long-range plan should be performed in contact with the local planning organizations (of the rank of the oblast planning commission) and should promote the distribution of intersectorial resources subject to the national economic importance of the enterprises and works being located. The information on the results of such a selection and on the distribution of resources should be sent to the sectorial planning organizations, so that they would have information on the specific conditions of the location of their enterprises. It will determine the further reduction of the number and proportion of sectorial proposals which are not conducive to the increase of the efficiency of industry of the region.

The comprehensive regional program is a tool which makes it possible to raise the long-range plan of the development of the economy of a region to a qualitatively new level. It makes it possible to elaborate it while focusing attention on the main tasks which the national economy of the country in the future period in question sets for the region.

FOOTNOTES

1. L. I. Brezhnev, "Rech' na Plenum Tsentral'nogo Komiteta KPSS 27 noyabrya 1979 goda. Postanovleniye Plenuma TsK KPSS" /Speech at the CPSU Central Committee Plenum on 27 November 1979. Decree of the CPSU Central Committee Plenum/, Moscow, 1979, p 21.
2. See G. I. Fil'shin, "Methodological Problems and Procedural Approaches to the Formation of Long-Range Regional Programs," "Metodologicheskiye problemy formirovaniya dolgostrochnykh regional'nykh program" /Methodological Problems of the Formation of Long-Range Regional Programs/, Novosibirsk, 1979.
3. See "New Official Materials. Comprehensive National Economic Goal Programs," EKONOMICHESKAYA GAZETA, No 29, 1980.
4. A similar indicator has been proposed and repeatedly used by the Council for the Study of Productive Forces attached to USSR Gosplan in the process of elaborating general plans of the development of the national economy of the country (see S. A. Nikolayev, "Mezhrayonnyy i vnutrirayonnyy analiz razmeshcheniya proizvodstvennykh sil" /The Interregional and Intraregional Analysis of the Distribution of Productive Forces/, Moscow, 1971, pp 168-182).
5. The already mentioned Main Methodological Statutes on the Elaboration of Comprehensive National Economic Goal Programs, which were approved by USSR Gosplan, are a significant step forward here (see EKONOMICHESKAYA GAZETA, No 29, 1980).

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REGIONAL DEVELOPMENT

DEVELOPMENT, PROBLEMS OF THE FAR EAST AREAS DESCRIBED

Taiga Natural Resources

Moscow PRAVDA in Russian 21 Dec 80 p 3

[Text] The Far East is rich; many of its industrial sectors occupy leading roles in the country's economy. Their roles will grow even greater in the future. The draft, "Primary Directions for Economic and Social Development for the USSR for 1981-1985 and the Period to 1990" envisages accelerated assimilation of the kray's natural resources. Currently, scientists from the USSR Academy of Sciences Far Eastern Scientific Center are formulating a long-range program for the comprehensive development of that territory's industrial resources.

Non-ferrous metallurgy is the area's leading economic sector. The chief problem here which must be resolved during the new five-year plan is the comprehensive processing of raw materials. For example, the ore from the Festival'noye Deposit in the Priamur'ye contains more than 20 elements. Currently, only the more useful are being extracted. Additionally, a plant is under construction which will employ new technology to enable fuller utilization of the ore resources. However, other deposits are still awaiting their time.

At the Khristal'nenakiy Concentrating-Mining Combine, that situation has already resulted in secondary processing of the ore, which has entailed additional major expenses. It would seem that it is time to review existing standards and prices for concentrating products, and to consider the cost of by-product elements in the planning process. Then the enterprises' interest in the comprehensive processing of raw materials would increase.

The significant lag of geological-exploratory, scientific research and planning-research work in the region is cause for concern. Their volume, particularly in the North, warrants an increase of five to tenfold.

Ocean biological resources at our disposal are great. The region is capable of providing a considerable part of the country's production. To attain this, however, a great deal must be done. Only 50-60 percent of the fishing industry's requirements for equipment, machinery, and spare parts is now being satisfied. As a result, the fleet and its shore enterprises experience unproductive stoppages. It is obligatory that the method employed to process raw materials be perfected. With existing technology, the protein content in fish products is significantly reduced.

One cannot take from Nature without giving in return. The more the biological resources are used, it also becomes necessary to replace them. Calculations indicate, for example, that the raising of far eastern salmon will result in millions of rubles in net profit over two five-year plans. The organization of farms to raise scallops, mussels, and seaweed merits considerable attention.

Take the forestry industry. Thirty percent of all-union forestry reserves lie in the far east taiga area. These reserves are not now being utilized in an efficient way. Losses are high during preparation and processing. Due to insufficient capacities, a significant portion of timber is shipped to other regions in the country and abroad in unprocessed form. With the requisite development of the cellulose-paper, the hydrolysis-yeast, wood chemistry and other production, up to 25 million cubic meters of timber could be saved annually.

It is mandatory that the development of cellulose production from deciduous raw materials be mastered and accelerated. As far as the assimilation of the BSM zone and the northern regions, the deciduous larch will predominate in lumbering. After all, its reserves constitute three-fourths of the timber reserves here.

The considerable problem of rational utilization of the cedar-broadleaf forests remains. For example, more than four times as much honey and ten times as many nuts can be obtained than is being done today. Moreover, virtually all the cedar-broadleaf timbers have been subjected to cutting-felling and are in need of strict protection.

Fuel-energy reserves are vast here. Far East hydroelectric reserves constitute more than one-fourth of the all-union reserves. The discovery of new oil and gas deposits is forecast. Considering the increased demand for this fuel, research in the gas and oil-bearing provinces must be sharply augmented.

At the present time, shortages of fuel and energy are growing in our country. Existing electric generating stations are being expanded, and new ones are being built. But in the unified electric power system of the Far East, particularly in Komsomol'sk-na-Amure, Khabarovsk, and Vladivostok, electric power shortages occurred during the past winter. The situation currently is even worse. This is primarily due to the fact that construction is slow on the electric power transmission line (LPT), which results in poor utilization of the existing stations' capacities. For example, the Zeyskiy Hydroelectric Station (GES) has a unit which recently was placed into operation, but which is operating at less than full capacity.

Over the long term, the energy base of the Far East will grow rapidly. The Bureyskaya and the Keryungrinskaya (in the Yakutskaya ASSR) electric power stations are under construction, and plans call for the Doldykanakaya to be placed in operation. Assimilation of the Kamchatka geothermal resources has been outlined, and the Mutnovskaya Geothermal Electric Power Center is scheduled to go operational. It is time to expedite construction of electric power transmission lines. In our opinion, this should be provided for in the 11th Five-Year Plan.

The primary fuel-power balance of the Far East today remains imported coal. The delivery of that coal from the Transbaykal has increased four-fold over a period of 10 years, but demands are growing more rapidly. Our daily deliveries of coal require 15 to 20,000 rail cars, which complicates the work of the railroad workers.

And what funds are expended! Since the beginning of the five-year plan, 250 million rubles have been spent on shipping coal from Transbaykal to the Primorskiy Kray alone. We would add millions here which have gone for shipping coal to other far eastern regions. What is more, major deposits exist here. The projected reserves total 15 times those calculated. Although a number of deposits are of not particularly high quality, their operation would be efficient.

The Far East is in need of equipment adapted for its conditions, which are often severe. Common machines and machinery are in service here about one-half as long as projected. The efficiency of earth moving equipment is about one-third to one-half the established standard. However, the technological layouts designed for the western regions of the country are frequently duplicated for the Far East.

It must also be considered that expenses for the labor force in this zone are considerably higher. This is not only due to the coefficient for wages. More is spent on construction of living accommodations and protecting personnel from severe conditions. Centralized management, mechanization, and production automation demand considerable concern. In summary, one work area costs twice to two and one-half times more than in the country's European regions. Therefore, manual labor expenditures must be kept to a minimum. Equipment capable of satisfying this requirement is, of course, more capital intensive. Nevertheless, the savings in human labor recovers the additional expenditures with interest.

The Far East uses only one-tenth of its own machinebuilding and metal working production. At the same time, considerable equipment is shipped here. In a word, the coordination of production and requirements in this region is hardly perfected. Conditions here urgently require the expansion of our own machinebuilding base. The scale and specific nature of assimilation of eastern regions are opening a considerable market for it.

Today, the potential of the country is such that we must, and are obliged to be guided by a longterm approach toward the development of the far eastern region. A major step must be taken along this path during the 11-th Five-Year Plan. With the introduction of the Baykal-Amur Mainline, a broad second industrial belt is created in the kray. By the year 1990, it will provide a significant part of the industrial production of the Far East.

Future assimilation is in store for such regions of the Tuguro-Chumikansk type, where new deposits of minerals have been prospected. We are now developing a tailored model for the assimilation of this region, which is bound with the future economy of the regions. In order to reach the local taiga treasures, a 300 kilometer rail spur is needed. The construction of that spur, in our view, is indicated immediately after the BAM is laid, that is, at the end of the 11-th or the beginning of the 12-th Five-Year Plan. Moreover, this should be accomplished by using the same construction organizations which have gained experience in working under taiga conditions, in swampy conditions, and with permafrost.

The CPSU Central Committee draft for the XXVI Party Congress outlines a broad program for the further development of the Far East economy. In supporting that program, we would consider it useful to consider our proposals in section X and a number of other sections under Basic Directions.

Chukotka Development Problems

Moscow KOMSOMOL'SKAYA PRAVDA in Russian 18 Nov 80 p 2

[Text] Vast changes have taken place in the Chukotak Autonomous Okrug just as in the rest of the country. In those expanses where one previously encountered only the rare reindeer herder nomad camp or the portable home of a sea hunter, lights now shine from numerous settlements and cities.

It is as though the northeast territories have come closer to the rest of the country. The main thing is not that distances have been reduced; of considerable more importance is the rapid socio-economic development of the okrug. In December, the Chukotak Autonomous Okrug celebrated its fiftieth anniversary. This half century, without exaggeration, encompassed a thousand year path of development. When the atomic power station was built in Chukotka, one of its natives, the now renowned writer, Yuriy Rytkeu, proposed placing an ancient lamp in its wall, a "tallow" lamp, to figuratively mark a century of development for our people, who once gained literacy by the light of tundra moss burning in salted tallow.

Chukotka provides the country with fish, fur, and reindeer venison; we must expand tin production, build new mines and settlements, and continue large scale study and research of Transpolar resources. First priority is people. I am not, however, rushing to appeal via "KOMSOMOL'SKAYA PRAVDA" to our youth to come to Chukotka! Besides work, we must offer an apartment or room to the new settler. It is this problem that I would term the main problem for the northeast. "Residential construction must be more closely coordinated with the resolution of production tasks" was the emphasis of comrade L.I. Brezhnev's speech during the October 1980 Plenum of the CPSU Central Committee. "The pace of assimilating new regions in Siberia and the Far East...is to a large degree determined by the availability of well-provided housing". The Chukotak Autonomous Okrug to this point is lagging severely behind other regions of the country in providing housing and social and cultural service facilities. A major portion of our housing are barracks and obsolete, deteriorating houses from the 1930-1950's.

Construction here is difficult; each house raised in our area runs 3 to 5 times the cost of a similar unit in the central Russian oblasts. Of course, providing housing for every worker in the Transpolar Region costs a great deal, but one must not forget the tremendous contribution the Chukotak inhabitant makes to the state treasury. We have now established highly specific long term perspectives for our kray in the production of short-supply minerals not only for the next five-year plan, but up to the year 2000 as well. Those perspectives are of such scope that we will not be able to cope with our current efforts.

If Chukotka does not offer the arriving worker a nice apartment in a modern settlement, in addition to the northern wage, that worker will not stay long in the Transpolar Region. After all, the standard of living is improving everywhere. Perhaps this is why the shortage of labor resources for us only becomes more acute: overall, for the Magadan Oblast, the average annual number of arrivals to live and work here during the 10th Five-Year Plan dropped by 40 percent in comparison to the 9th Five-

Year Plan. The North needs not novices, but people familiar with the cold and with complicated work. In those still few Chukotka settlements offering city comforts, the workers live not by years, but by decades and here stable production collectives are taking shape, growing, and producing a generation of native Northerners.

A second way to solve the problem of the working force we see to lie in the improvement of technology and in the organization of production. The scientists provide us with data concerning a significant "overexpenditure" of human labor: in the mining-extraction sectors of the USSR Asian North today, for each laborer in primary production, approximately six workers are engaged in ancillary and service sectors, while, for example, this ratio—is 1:1.5 in the Canadian North. In actuality, each of the innumerable organizations in the north attempts to exist as its own "homestead", with its own repair services, garages, communal enterprises, and electric power stations. This does not result from the good life: one can't set up a worse organization, but it is "one's own"; you can't operate without relying particularly on someone. As a result, for example, departmental electric power stations number several hundred in Chukotka. These low power "small engines" produce electric power which is 5-6 times more expensive than that produced by the governmental electric power system. The solution is to expand the Bilibinskii Atomic and State Thermal Power Stations, and to construct new power transmission lines—those measures would result not only in a savings of thousands of tons of diesel fuel and millions of rubles, but would free thousands of workers as well. And if one considers the future, then it is now time to fully concentrate on planning the first GES in Chukotka—on the Anguena River.

Chukotka will not be conquered with temporary people and "temporary versions", and this relates not only to construction and power engineering. The laying of permanent highways over our land is postponed from year to year. Drivers are forced to beat their expensive equipment over temporary unpaved "winter roads". Because of the lack of roads, construction periods for new enterprises and settlements are stretched out, and stoppages occur; tremendous energy and funds are expended in the construction of gigantic warehouses to store annual reserves of production, fuel, and construction materials—from the time when the "winter road" becomes impassable to the time it again is servicable. Just a single highway from Mys Shmidt to the port of Yegvekinot would save time and money and would free thousands of workers for other areas.

Chukotka, as apparently does the entire North, suffers a shortage of equipment designed for northern operations. It is commonly understood: any machinery here is subjected to significantly higher wind, temperature, and other natural stress than anywhere else. Unfortunately, until now, motor vehicles and other equipment designed for northern use are not being produced in the required numbers. A policy of labor saving must act as the "pin" for the assimilation of the Trans-Polar Region. Inasmuch as the maintenance of an individual here is quite expensive, in fact more expensive than anywhere else, the introduction of new scientific-technological achievements must be law, primarily in the organization of northern regions. It has been calculated that the elimination of a single worker in primary production in the mining industry of Magadan Oblast through the introduction of new technology will result in an economic effect of 19,000 rubles annually.

It is unthinkable to visualize the future of the Trans-Polar Region without reindeer breeding. More than a half million domestic reindeer roam the tundra of Chukotka, constituting the largest herd in the world. Technical advance has also affected northern agriculture. Life has demonstrated however, that in this ancient sector, it is most necessary to pursue an intelligent combination of technical innovations with the traditional approach. Reindeer breeding sovkhozes now have powerful all-terrain vehicles, but encounter problems with spare-parts, repair, and delivery of fuel over great distances. What is more, the heavy tracked vehicles mercilessly disturb the tundra's vegetation cover. Quickly forgotten was the tried form of transportation, e.g. dog teams or horses, which have now, unfortunately, become an extreme rarity in the tundra. The reindeer breeders today listen to the radio and receive newspapers, with medical personnel, propaganda teams, mobile movie projection units, and libraries being flown in to even the most remote nomadic camps. The work of the reindeer breeders, however, remains difficult today. This profession demands considerable knowledge and skills. In this respect, we began to examine closely the professional orientation of today's students. It is now the situation that the children of reindeer breeders, from virtually birth to adulthood live in boarding schools in major settlements practically cut off from the tundra. In order for the youth to more enthusiastically enter agriculture, reindeer breeding offices are being established in the schools, where they study to master modern technology: radio-stations, motorized sleds, all-terrain vehicles, and motor boats. More frequently, parents are taking their children to the tundra for the summer. It is insufficient, however. The labor and life of the tundra are not considered prestigious in the eyes of our youth. In the age of satellites and atomic ice-breakers, the traveling home of the reindeer breeder remains a structure sewn from skins, and a campfire serves to warm it. The media have for years publicized prototypes of equipment designed for the north, air-cushioned, of comfortable mobile reindeer breeder homes with individual power sources and electric heating and such wonderful inventions. But while technological progress has produced innovations, it has "endowed" the reindeer breeders with cold, wooden houses, the design of which will not endure long moves. Chukotka reindeer breeding is not just venison and warm skins, it is a promising sector, providing millions in income. It would be well if the young scientists would consider how the most advanced achievements can be placed at the service of the tundra inhabitants.

These, in brief, are the types of problems which we must and will resolve, in order that Chukotka will undergo comprehensive development which is rational and has long-term perspectives.

Sakhalin Development

Moscow EKONOMICHESKAYA GAZETA in Russian No 3, Jan 81 p 4

Business-like and interested discussions of the CPSU Central Committee's Draft for the XXVI Congress are now underway in enterprise and organizational labor collectives and in oblast and kray party conferences. Our correspondents from the Sakhalin Oblast Party Conference publish their commentaries below.

[Text] "The chief areas in which the efforts of the oblast party organization concentrated its efforts during the past five-year plan", noted the First Secretary,

Party Oblast Committee, P.I. Tret'yakov, in his report, "were in providing for dynamic, comprehensive development of the economy, improved effectiveness of the economy based upon accelerated scientific-technological progress, improved quality of work, and improved management". During the 10th Five-Year Plan, the volume of industrial production increased by 1 billion, 482 million rubles when compared to the 9th Five-Year Plan.

A new and significant step was taken in the development of a fuel-energy complex. Approximately a billion rubles in capital investments were made in this area during the five-year period. The Southern Sakhalin TETs-1 and 420 kilometers of high-voltage power transmissions lines were successfully introduced, and overall, the production of electric power during the five-year period grew by 27 percent and of thermal—11.6 percent.

The petroleum industry was an area of close attention and concern for the oblast party organization during the past five-year period. New deposits in the Noglikak area were brought in and the Mongi—Pogibi pipeline was placed in operation and geological prospecting operations for oil and gas are continuing. The plan for coal mining was overfulfilled.

The fishing industry underwent further development.

Agriculture achieved gratifying results. The government was sold 7,800 tons of cattle and poultry, 11,300 tons of milk, 49.3 million eggs, 36,700 tons of potatoes, 20,600 tons of vegetables, and almost 322,000 mink pelts over plan for the five-year quotas. The average annual gross agricultural output increased by 25 percent as compared to the 9th Five-Year Plan.

An entire range of social tasks were resolved. The average wage of workers and employees increased by 30.3 rubles and now totals 303 rubles per month. Residential housing totaling 1,385,000 square meters was constructed, as were schools for 9,177 students, hospitals with 495 beds, polyclinics providing for 1,000 visits, and pre-school institutions for 4,430 students.

The 10th Five-Year Plan basically concluded work to provide television broadcasting to virtually all cities, worker settlements, and populated areas of Sakhalin and the Kurile Islands.

The Tenth Five-Year Plan was concluded with outstripping progress by the collectives of 240 enterprises, production units and organizations, 713 shops and sectors, 244 ship crews, and 1,645 teams.

The conference cited examples of exemplary attitudes toward labor on the part of many collectives. The crews from the trawlers "Botman", "Roshchino", and "Surak" and the Nevel'ak base for the trawler fleet, for example, fulfilled the equivalent of 2 five-year plans during the five-year period. Comrade L.I. Brezhnev sent his sincere regards in conjunction with this labor victory to the outstanding workers of the collectives.

The successes achieved by the oblast are unequivocal. Nevertheless, as noted by the conference delegates, not all that was earmarked was done. The oblast did not fulfill the assignment regarding rates in the growth of labor productivity. The

delegates at the conference analyzed in a critical, business-like, and principled manner shortcomings in the management of economic operations, outlined ways to eliminate those shortcomings, and generalized the experience gained. This provides a reliable foundation for the successful resolution of tasks levied against the labor collectives of the oblast for the 11th Five-Year Plan. They were discussed in detail by the chairman of the oblast executive committee, V.A. Zakharov, in his report on the course of discussions relating to the CPSU CC Draft for the XXVI Party Congress.

The oblast's electrical power base is to be developed at positive rates. Construction is envisaged of a second phase of the South Sakhalin TETs-1 and a number of new electric power transmission lines, the introduction into service of which will conclude the creation of Sakhalin's integrated power system. Production of electric power is to be increased by a factor of 1.3—1.4. Oil extraction during the five-year plan will grow by a factor of 1.4—1.5.

The coal and timber industry will undergo further development. Geological research will continue to increase prospected sulphur reserves and other minerals as well. Capital and residential construction will continue on expanded scales.

The delegates' speeches displayed a particularly vivid concern for the comprehensive efficient utilization of the oblast's natural resources. One of the oblast's main riches is timber. Efficient utilization and replacement is a task of first-priority importance. However, for the past 2 years, there has been a shortfall of roughly one million cubic meters of lumber delivered to customers. The reason for the lag was frequently cited as objective difficulties: shortages of equipment, and natural element factors. But how to explain, as emphasized in the speech of A.N. Burovin, team leader of the timber preparation team of the North Sakhalin Industrial Timber Farm, the rare appearances of the "Sakhalinles" Association managers at the logging points, the fact that no heated equipment bases are being constructed at the plots, no 24-hour roadways are being laid, and there are no loading areas? As a result, the teams are idled daily for periods of 2-3 hours each, a loss of 15-20 cubic meters of timber. In this respect, wishes were expressed to persistently improve the organization and technology of timber preparation operations, and to implement programs to more fully utilize timber raw materials.

P.N. Kostyuchenko, team leader, combined team dockworkers-machinery operators No 19 of the Korsakov Maritime Trade Port, posed an interesting question during his speech: "We, unfortunately, have not established the required contacts among team leaders within the rayon and oblast, and after all, the various sectors of the economy within our island kray are closely interrelated. For example, if the timber workers perform poorly, this jeopardizes the fulfillment of tasks by mine-workers, paper industry workers, transportation workers, and builders. If the mineworkers fail to fulfill their plan, the situation becomes difficult for other sectors. A system must be set up to provide for meetings among team leaders and foremen from the various sectors, at which claims and complaints can be voiced, know-how exchanged, and they can learn from each other".

The first secretary of the Okhinsk city party committee, V.N. Boltovskiy described the contributions of Okhinsk Rayon petroleum workers in the overall utilization of the oblast's resources. During the five-year period, they extracted 37,000 tons of oil and 130 million cubic meters of gas over the plan. Still, the gas-oil extracting

enterprises are capable of better work. The VPO "Sakhalinmorneftegazprom," focusing attention on the more promising regions, must in no way reduce the volume of operations involving the collectives operating the old, but necessary and rather effective deposits.

Another important question was touched upon by the Nevel'sk Trawler Fleet Base Party Committee secretary, Yu.A. Dorofeyev. Several years have passed since the founding of the Sakhalin production association of the fishing industry, but the management methods for the enterprises have remained as before. The association has been unable to correctly plan the operations of the Nevel'sk and Kholmak fleet bases. Idle times of vessels at sea are still high for reasons which could be eliminated with the assistance of the association.

Serious difficulties are experienced by the party committee, Yu.A. Dorofeyev noted, in the organization of political and economic training on board the ships, in providing methodological and training materials for propaganda workers and students, and it is not to be found in their stores and kiosks at all. Various aspects of improving the efficiency of ideological work, and methods for providing for a comprehensive approach to the indoctrination of workers found expression in a number of the conference delegates' speeches.

More than 205,000 people in the oblast have participated in the discussions of the CPSU CC Draft for the XXVI Party Congress. They have submitted orally and in written form thousands of proposals concerning both economic and social problems and improving the quality of work in all sectors of production. It is proposed that the oblast planning commission, associations, administrations, and departments take into consideration during the course of plan formulation for the 11th Five-Year Plan all recommendations regarding future development of the economy, improved material welfare and level of culture for the oblast's workers.

The delegates supported unanimously the draft "Primary Directions", and in the name of the oblast's communist party members and workers, expressed the resolve to expand further socialist competition for the appropriate response to the XXVI CPSU Congress and to make a fitting contribution to the common cause of building communism.

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INTRODUCTION OF NEW TECHNOLOGY

KEY FACTORS IN TECHNICAL PROGRESS CITED

Moscow EKONOMICHESKAYA GAZETA in Russian No 2, Jan 81 p 10

[Article by Yu. Yakovets, head of a chair of the USSR Academy of the National Economy: "Fundamentally New Technology"]

[Text] New technology is a polysemantic concept. Both modernized, partially improved items, as well as new models of machines and varieties of materials, which realize more effectively an already known technical idea, belong to it. And, finally, fundamentally new generations of machines and technological processes, in which are realized the greatest achievements of scientific and technical thought, which make it possible to increase considerably the efficiency of social production, are understood as new technology and know-how. The need to develop and adopt in production fundamentally new technology and materials and advanced know-how is emphasized in the draft plan of the CPSU Central Committee for the 26th party congress.

Scientific and Technical Cycles

In the planned management of scientific and technical progress it is necessary to take into consideration the qualitative difference between traditional and fundamentally new technology, the periodic interchange of the evolutionary and revolutionary stages of the development of science and technology. On the basis of the laws of the scientific and technical cycle four phases can be distinguished in it. At the first phase of the formation of a new generation of technology the expenditures on scientific and experimental design developments, the renovation of production or new construction, the assimilation of new items and the adaptation to them of the sphere of application are great. The production volume of the new technology during this period is negligible, the cost and, consequently, the price are high.

At the second phase an abrupt growth of the production volume of the new technology and the obtained impact occurs. The number of new models of machines and spheres of their application increases rapidly. Then the phase of maturity begins, when the already assimilated technical ideas have become firmly established, the scale of production and the amount of the obtained impact increase, but the relative decrease of the cost of machines with the appearance of new versions of them is no longer so significant. And, finally, there is the phase of obsolescence of the given generation of technology. The further modernization of machines, which are based on a technical principle that has exhausted its economic potential, requires additional outlays which are not covered by the saving for the user.

The economic potential of many technical ideas, which are the basis for the technology being used, at this stage of the cycle is essentially already exhausted, which is one of the reasons for the slowing of the rate of economic growth and the decline of the output-capital ratio. Indications of the transition to a new stage of the scientific and technical revolution, which in essence means the break into the "next stage" of science and technology and will become the basis for the substantial acceleration of the growth rate of labor productivity and the efficiency of social production, are observed.

It is necessary to place the comprehensive approach to a qualitatively new level of technology and the concentration of resources for the planned assimilation in a brief period of the achievements of the new stage of the scientific and technical revolution at the basis of the management of the development of science and technology. The mass adoption of automated systems of machines, robotry and microprocessors and the extensive use of waste-free and low-waste processing methods and biotechnology are capable of providing a considerable increase of production and its efficiency. Only at this stage is it possible to overcome the strain with manpower, energy and raw material resources and to achieve a substantial improvement of working conditions and the environment.

Goal Programs

The measures on improving the economic mechanism are creating favorable opportunities for stepping up the rate of scientific and technical progress and orienting it toward the end national economic results. One of the decisive conditions of the successful realization of these opportunities is the improvement of the system of management of scientific and technical progress.

The long-range planning of the development of science and technology in the form of comprehensive goal programs can and should become the basis of this system. Each such program, L. I. Brezhnev noted in his speech at the October (1980) CPSU Central Committee Plenum, should be a sound plan, which rests on precise estimates, of measures aimed at the end result, at the complete solution of one problem or another.

This also fully pertains to scientific and technical comprehensive goal programs.

In order not to allow the dispersal of forces, the number of these programs, apparently, should not be great. And it is expedient to orient each program toward the comprehensive development of a fundamentally new scientific and technical direction.

As an example it is possible to cite the program on automatic manipulators (industrial robots). The assignments for ministries on the production and introduction of automatic manipulators will be singled out by a separate line in the plans of economic and social development. It is planned to equip automated demonstration sections and shops with them. For the purposes of economic stimulation a portion of the additional profit obtained from the use of the manipulators will be left at the disposal of associations and enterprises for improving production and stimulating the workers.

Scientific and technical comprehensive goal programs by their nature are multisectorial. Certain conditions, of course, are needed for their successful implementation.

First of all the question of the proportions in the development of science and technology and the overcoming of the lag of basic research and the pilot experimental base arises. In the plan and statistical reporting it is expedient to single out specially the assignments and the resources for the performance of basic scientific and technical research and to increase substantially the investments in the pilot experimental base, having ensured the careful development of models of new generations of machines before they go into mass production. A slight reduction of applied research, which at present is often inefficient due to the deficiency of the basic stockpile and the weakness of the experimental base, can, in our opinion, become the source of resources for this.

Comprehensive goal programs are especially effective when they cover all the stages of the cycle "science - technology - production - consumption," but are not limited to the development of test models and batches of new machines. The impact of new technical ideas depends on the rate of their incorporation in mass production. A loss in time is losses in efficiency. And here it is impossible to do without strict standard periods of the reorganization of production and the sphere of consumption on the latest technical base.

And, finally, basic research and intersectorial development, it seems to us, cannot but have reliable, stable sources of financing. In the sectors such a problem is solved with the creation of a unified fund for the development of science and technology. But the most fruitful intersectorial scientific and technical directions, as paradoxical as it may be, are in the worst situation and are adopted with difficulty. If a fund for basic scientific and technical research and intersectorial development, which is formed by means of budget allocations and deductions from the profit received from the introduction of fundamentally new technology, were at the disposal of the State Committee for Science and Technology, this problem would be eliminated. The bulk of the fund, perhaps, should be placed at the disposal of the directors of scientific and technical comprehensive goal programs for the financing of the outlined measures on the development and assimilation of new generations of intersectorial technology.

Stimuli of Adoption

Not the last role in the creation of favorable conditions for the development and adoption of highly efficient technology belongs to prices.

A differentiated approach to traditional and fundamentally new technology is also needed in pricing. The appearance of the latter entails great "start-up expenditures," but then the cost of new items subsequently decreases rapidly. It is impossible not to take these peculiarities into account when determining the price limits and wholesale prices, to recover the temporarily higher expenditures by means of centralized funds, and at times to set the price for the consumer for a limited period at a lower level, in order to broaden the sphere of application of the new technology, to rapidly increase the scale of its production and to sharply decrease the cost. Here, it seems to us, the use of graduated prices would be especially effective.

The amount of the incentive markup on the wholesale price of a product, to which the Seal of Quality has been awarded, if its output is based on developments which

are recognized as discoveries or inventions, is increased 1.5-fold. It seems that this procedure should apply first of all to the development of new generations of machines on the basis of comprehensive goal programs.

I would also like to direct attention to the following problem. When planning the efficiency of new technology and determining the prices for it the cost accounting impact in the form of the increase of the profit or the decrease of the cost is used as the basis and far from all the components of the national economic impact, which go beyond the enterprises, are taken into account. Thereby the economic boundaries of the use of machines are unjustifiedly narrowed. The quantitative evaluation and consideration in planning and design estimates, pricing and economic stimulation of the total national economic impact of new technology in planning work on the increase of the end national economic results are becoming more and more necessary. It is a question of that national economic impact which includes the social and ecological impacts that originate owing to the saving of expenditures on the reproduction of manpower and natural resources, environmental protection and the improvement of conditions for a creative nature of labor.

In the system of the management of the development and assimilation of new technology its economic stimulation is called upon to play an important role. The bonuses for the development and adoption of new technology in 1979 for industry were 237 million rubles—only 1.4 percent of the total economic stimulation funds, which, of course, cannot be recognized as adequate. The improvement of economic stimulation is called for by the adopted decrees on the economic mechanism.

It seems expedient to increase the material incentive for the development and assimilation of new technology and to link it with the fulfillment of the comprehensive goal programs and the obtained impact.

The importance of fundamentally new technology gives grounds to make the suggestion to insert in the draft of the Main Directions in Section II the clause: **"In a short period and with the maximum concentration of resources to assimilate the achievements of the new stage of the scientific and technical revolution, to achieve the development and series production of fundamentally new technology which ensures a significant acceleration of the growth of labor productivity, the saving of resources, the decrease of the cost of production, the increase of the competitive ability of domestic technology on world markets, to begin the planned reorganization of all the sectors of the national economy on the latest technical base" / in boldface/**.

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